

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

ELSMERE PARK CLUB, L.P.,	:	
a Delaware limited partnership,	:	
	:	
Plaintiff,	:	Civil Action No. 04-1321 (SLR)
	:	
v.	:	
	:	
TOWN OF ELSMERE, a Delaware	:	
municipal corporation, ELLIS	:	
BLOMQUIST, EUGENE BONEKER,	:	
and JOHN GILES,	:	
	:	
Defendants.	:	

**COMPENDIUM OF CITATIONS TO DEFENDANTS' OPENING BRIEF IN
SUPPORT OF ITS MOTION *IN LIMINE* TO EXCLUDE THE EXPERT
REPORT AND TESTIMONY OF DAVID J. WILK**

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Environmental Compliance and Litigation Strategy
September, 1997

A Property Valuation Primer

HOW TO USE COMPARABLE SALES TO VALUE CONTAMINATED PROPERTY

Sue Ann Adams [FNa]
Trevor E. Phillips [FNa]

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Phillips

Part 1 of 2.

The market value of contaminated real estate is often a hotly contested issue in environmental litigation. Of the traditional approaches to real property valuation, the sales comparison approach is the most broad-based and straightforward method. It is the only approach that can be used to value all property types, including both income-producing and non-income-producing properties. When used correctly, the sales comparison approach produces strong market-based evidence to support an estimate of property value. For these reasons, analysts, as well as triers of fact, rely heavily on this approach. Successful environmental litigators should be knowledgeable about some of the issues involved in applying the sales comparison approach in the context of contaminated property, particularly as the approach is used more and more often to value complex sites.

The sales comparison approach has been used effectively in the valuation of residential properties affected by contamination where there are a large number of homogeneous properties that are similarly affected. Historically, because of the lack of market transactions, this approach has not been employed effectively when valuing heterogeneous commercial or industrial properties with complex, site-specific environmental conditions. Today, however, as the risks associated with the transfer and ownership of contaminated properties are better understood and the market for these properties expands, analysts increasingly are able to employ the sales comparison approach. The key to the successful application of this methodology, however, is to proceed with care and attention to detail.

Methodology

In the context of litigation, the valuation of contaminated real estate is often required as one of the key steps in estimating the diminution in market value of real property that may be affected by contamination. Measurement of property value diminution is achieved by subtracting the market value of the subject property in its impaired condition from its market value in the hypothetical unimpaired condition. This is analogous to the "before and after" valuations typically performed in condemnation appraisal. An analyst must, therefore, search for impaired, as well as unimpaired, comparable sales. The basic test of comparability is to satisfy the principle of substitution. That is, property values tend to be set by the amount a buyer would pay for a substitute property of similar utility and

desirability to the subject property.

Once the requisite transactions have been identified, the sales comparison approach requires that the analyst adjust the price of each sale to reflect the differences between that sale and the subject property. Elements of comparison are the key attributes of properties and transactions that influence market value, and they form the framework for systematic adjustments to be made to comparable sales.

The analyst evaluates each element of comparison individually and determines the appropriate adjustment to be made to the comparable sale price. Adjustments will be made upward or downward depending on relative inferiority or superiority, respectively, when compared to the subject property. By carefully assessing the degree to which each sale is comparable to the subject property, and by weighing the relative importance of each element of comparison, the analyst may logically conclude an estimate of value.

Elements of Comparison

Appraisal literature has addressed the elements of comparison associated with "unimpaired" property, but the inclusion of contamination-related elements of comparison adds considerable complexity to the analysis. Both real estate and contamination-related elements of comparison may be grouped into the following categories:

- Market factors: real property rights conveyed, financing terms, conditions of sale and market conditions.
- Physical factors: location, physical characteristics (size, age, construction quality and condition) and use (zoning).
- Economic factors: market rent, operating expenses, lease provisions, tenant mix, occupancy and management.
- Contamination factors: nature of the contamination, extent of the contamination, impact of contamination on the use or utility of the property and on- or off-site sources of contamination.
- Remediation factors: cost and timing of remediation and the nature of remediation techniques (effect on business operations).
- Regulatory factors: regulatory jurisdiction, predictability of regulatory framework and post-closure land use restrictions.
- Liability factors: responsibility for costs associated with remediation, third-party liability, indemnification, representations, warranties and insurance products.

A Two-Step Analysis

The application of the sales comparison approach to estimate the value of an impaired property is a two-step process. First, adjustments are made to each comparable, relative to the subject, for non-contamination-related elements. The first step typically involves quantitative adjustments that are applied to the elements of comparison in the market, physical and economic categories. These types of adjustments can be observed and measured from an analysis of market data. For example, the analyst can observe a price differential due to the addition of a swimming pool to an otherwise similar home and can draw a conclusion as to the appropriate numerical adjustment needed. To assist in this analysis, the analyst may use an adjustment grid in which numerical adjustments are applied to each element of comparison in order to relate them to the subject property.

Second, the contamination-related elements of comparison are studied. Unlike the traditional real estate-related elements of comparison, the complex and unique impact of the contamination factors on market value makes a quantitative analysis difficult. Adjusting comparable sale prices for differences attributable to contamination, remediation, regulatory and liability factors requires research and understanding of environmental issues that are not addressed in typical real estate appraisals. A complete environmental history of both the subject property and each comparable sale is required, as well as knowledge of the provisions in the purchase and sale agreements that may have addressed the contamination issues associated with each transaction. As such, a qualitative analysis of the contamination factors is usually more appropriate, with the analyst concluding that contamination-related elements of comparison for each sale are superior, inferior or similar to the subject property. This provides the analyst with a

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basis for bracketing the probable range of value for the subject property.

Whether comparable sales analysis techniques are applied to unimpaired or impaired real estate, the basics remain the same: Use the most recent sales that are comparable in terms of property type, location, size and physical condition (including environmental condition) and make supportable adjustments. Conceptually, the sales comparison approach is relatively simple to understand. Nevertheless, considerable attention to detail and thorough research are required for analysts to estimate a credible indication of market value. n

Next month: A walk-through of a property valuation and a discussion of pitfalls.

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contamination. Assessment reductions may also be viewed as a penalty to the public forced to bear these additional burdens. They especially penalize those taxpayers who take responsible measures and make investments to keep their property free from contamination.

A number of courts, including the high courts of New York and New Jersey, have considered these questions of environmental and tax policy and rejected them. While finding that they have some intellectual appeal, these courts have nonetheless held that public policy concerns cannot subordinate statutory and state constitutional requirements to assess property at its "full" or "true" value. Notwithstanding these results in the courts, however, state legislatures may still elect to tax owners of contaminated property whose assessments have been reduced. In Minnesota, for instance, the legislature enacted a novel "contamination tax" based on the amount of value reduction received on account of the presence of contamination.²⁷
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The Mold Challenge in Florida
2004

***1 OVERVIEW OF THE PROBLEM/WAYS TO MINIMIZE OR AVOID THE RISK OF MOLD CLAIMS**

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***2** Mold claims continue to rise, not only in the State of Florida, but nationwide. The "M word" is taking on a whole new meaning in terms of the level of claims and lawsuits currently being filed nationwide.

This paper will provide an overview of the problem and also ways to minimize and avoid the risk of mold claims.

OVERVIEW OF THE PROBLEM

A. Mold - What is it?

Mold is a natural recurring living organism. Mold helps break down dead organic material. It also helps produce products such as beer, wine, bread, cheese, penicillin and other medicines.

Unfortunately, many people are allergic to mold spores and reactions to mold spores can become serious in terms of compromising individuals respiratory health and other physical manifestations associated with exposure to mold. Mold has existed for over four hundred million years. Over a hundred thousand species identified, with approximately a thousand found in the United States. The common forms of mold in the United States are Stachybotrys, Cladosporium, Penicillium and Aspergillus. Of course, the sole source of mold is water. In order to colonize, mold needs water as a source and also the lack of ventilation in a trapped ***3** environment, such as within drywall or carpet. Growth will continue when mold is not quickly removed.

B. Causes of the Problem

A great deal of media attention, as well as large legal verdicts, have resulted in mold being in the forefront recently. Some would argue that there has been "hysteria" by homeowners, and others would argue that there are viable complaints relative to property and personal injury claims.

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Businesses and workers in a contaminated environment continue to claim property damage and personal injuries as a result of being exposed to a contaminated environment. Unfortunately, there are continuing debates in the scientific community as to what, if any, physical manifestations are directly caused by mold exposure and what long term effects result from significant exposure.

The media, trial lawyers, regulators, state officials and others continue to try to deal with the growing problem of mold. The biggest problem facing the homeowner or business owner is realizing that the property is contaminated, finding the source of the mold and taking the correct remediation actions to resolve the problem. While a large majority of the claims filed are for property damage, personal injury claims are on the rise.

The only mycotoxin producing mold is Stachybotrys and long term exposure can cause significant health effects. Many clients complain of the following health effects to mold exposure:

- Burning eyes
- Headache
- Nausea
- Nose bleeds
- Allergic Reactions
- Asthma
- Exhaustion
- Cognitive disorder
- Pulmonary hemorrhage
- Liver damage
- Central nervous system damage
- Brain damage
- Cancer
- Death
- Sinus infections

*4 In California case involving Ed McMahon, an autopsy clearly showed that the McMahon's dog died directly from the exposure to toxic mold. There are very few cases that have been reported where toxic mold in a home environment caused significant long term health problems. Most of the complaints seem to be common reactions by parties when immune systems are some way compromised. Unfortunately, there are no current standards or consensus on the health affects, nor are there any standards relative to testing, assessment or remediation in the home or work place.

C. Parties Who Can Be Affected

There will continue to be debates in this arena as to how parties are affected by mold. Normally, homeowners and employees working in a contaminated environment file claims.

D. Types of Claims That Can be Brought

A great number of property claims are being sought at this time relative to contaminated properties. Once the water source is determined, the parties are able to retain the services of a microbiologist, industrial hygienist, or air quality expert to inspect the property. Once an assessment occurs, and after conducting a protocol with a licensed contractor or a certified mold remediation specialist, removal of drywall, studs, and other property damaged by the mold should occur. Following this remediation and removal the property can be restored to a healthy environment.

The majority of claims regarding mold, contrary to the public's belief, fall in the area of property damage. Once a property has received an air quality testing, and significant mold spores have been detected clearly illustrating colonization of mold, a protocol should be *5 developed by a microbiologist or an industrial hygienist. An estimate is determined by a licensed contractor as to what the extent of the restoration work will be and the extent of the property damage loss.

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The collateral issue that arises in most property damage claims is Alternative Living Expenses (ALE). ALE results in client's incurring expenses as a result of living at an alternative property. Depending on the extent of the property damage, a client could be displaced from one month to a year while work is completed.

Additional damages occur where the property has a diminution of value. Thus, a claim for this diminution of value is necessary.

Diminution of market value in a property clearly allows a homeowner to bring a claim for the loss of actual cash value. See, American Reliance Insurance Company v. Perez, 689 So. 2d 290 (Fla. 3d DCA 1997). A homeowner does have the legal right to recover the diminution of value where the property damages have resulted in the diminution of fair market value. See, U.S. Steel Corp. v. Benefield, 352 So. 2d 892, 894-95 (Fla. 2d DCA 1977).

Additionally, damaged property can sometimes carry "stigma" damages, even after repairs have been made, especially in cases involving construction defects, mold damage and/or termite infestation.

So-called diminution of value and/or stigma damages result if properly presented to the jury, with substantial evidence, can indicate that the cost of repair was substantially greater than the diminution of value. See, Orkin Exterminating Company, Inc. v. DelGuidice, 790 So. 2d 1158 (Fla. 5th DCA 2001). The Fifth Circuit reversed a jury award of \$300,000 against a pest company, the court went on to note that stigma and diminution damages would be recoverable when evidence is presented that the cost of repairs is substantially greater than the diminution of value and stigma damages are recoverable in Florida when the element of diminution in market when reparation is either impracticable or exceeds the overall diminution in value.

Additionally, property owners can also seek the payment for code upgrades, loss of use, debris removal, waste remediation and loss of use of personal property relative to mold claims.

E. Importance of Proactive Detection and Management of Water Intrusion and Mold

Clearly, either homeowners, building managers and others have a duty to inspect their property and to mitigate damages. It is vitally important in the mold context that parties who smell an odor, seek avenues to investigate any potential mold or mildew within the property. Due diligence should be used to inspect properties and look for avenues to immediately address any potential mold damage. It is likely within forty-eight (48) hours of a water intrusion that the parties potentially will incur substantial damages if immediate steps are not taken to remediate the problem.

F. How Real is the Problem?

Mold is very real to parties that are affected by living in a contaminated environment. Clearly, displacement of a family, due to a contaminated environment, causes much stress and anxiety.

Additionally, many people are affected by living in a contaminated environment, which compromises their physical health. This will continue to be a real problem, which the public will have to address, and clearly due to the tremendous increase of claims, the problem will continue to grow.

***7 WAYS TO MINIMIZE OR AVOID THE RISK OF MOLD CLAIMS**

A. Quality Control During Design and Construction Phases

It is vitally important in the early stages of construction and design, that qualified licensed contractors understand the potential problems they face in the event that they engage in negligent construction tactics. Each phase of the construction should be carefully monitored to ensure that there be no future water intrusion into the property. Only qualified experts, including engineers, architects and contractors should work diligently to ensure that no defects occur at any stage of the construction that would result in potential claims.

B. Development Management Protocol and Standards for Routine Inspection/Monitoring

Many major developers have now set in place management protocol and standards relating to routine inspection and

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monitoring, providing guidelines to construction workers. This protocol will insure that no future problems will develop in the construction of a residential/commercial property. Particular attention should be paid to HVAC system, the heating and ventilation and air conditioning system, should be properly developed and tested to insure there are no potential air quality problems with the home. Once constructed the property's indoor quality experts should inspect the property, prior to a CO, to insure that the air quality does not contain any potential toxins.

C. Documentation Procedures to Identify Liability for Mold Claims Caused by Tenants Due to Action/Inaction

Any complaints by a commercial tenant and/or residential tenant should clearly be identified and documented by property owners. Property owners should take steps to properly *8 investigate complaints by tenants of a contaminated indoor environment that can potentially lead to litigation.

If any tenant is complaining of exposure to potential toxins, the property owner should immediately retain an indoor quality expert to inspect the property and also engage in destructive testing to insure that there is no colonization of mold within the property. The property owner should also inspect the HVAC system and any alleged source of contamination to insure that there is no major mold issues that may develop into protractive litigation.

Documentation should be maintained indicating that the property owner is routinely checking the property to insure that there is no potential poor ventilation, which will lead to potential claims.

D. Implement Periodic Investigation of Existing Assets/Buildings

It is vitally important that the property owner periodically investigate and inspect the property to insure that no sources of mold are developing. The United States Environmental Protection Agency has classed or reported physical problems related to indoor air quality into two categories. First category, is sick building or tight building syndrome, and the second category is building related illness. By implementing periodic investigations of the property, it is very likely that a property owner can avoid any claims of sick building or building related illnesses when the property owner takes proactive steps to resolve potential problems.

Using the sick building syndrome claim, multiple parties complain of discomfort or health affects rather than one party. Rather than relying on the EPA or other governmental agencies to control indoor quality, it is vital that individual property owners in the commercial and residential arena take steps to insure that inspections of the property are done on an annual basis.

*9 If tenants are complaining of potential indoor breathing problems, it is important to not ignore such allegations, but to take steps to inspect the property and investigate the allegations of the tenant.

E. Conduct Separate Water Intrusion/Mold Inspections as Part of Pre- Acquisitions Due Diligence Process

Real property owners clearly have duties to investigate matters brought to their attention. The property owner's obligations are as follows:

- Investigate latent hazards
- Warranties to occupants of land or buildings
- Maintain premises
- Remediate

Failure of a property owner to conduct water intrusion investigations and mold inspection prior to acquiring property can only lead to potential exposure for mold claims. Due diligence should be used prior to purchasing any property to insure that there is no potential exposure to the owner for purchasing a contaminated environment.

Many claims are started against real estate agents, home inspectors and others in the real estate business who turn a blind

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eye to an environment that they know, or reasonably should know, is contaminated. The real property owner is under the same due diligence obligation. It is vitally important to take prior action and inspect for any water intrusion or mold prior to buying a property.

F. Investigate Availability of Insurance Coverage for Mold for All Existing Assets

Finally, it is becoming increasingly difficult to obtain insurance as it relates to mold. It is likely that the insurance industry will not insure properties, commercial or residential, for mold *10 related claims in the near future. If a party does receive insurance covering mold issues the premium will be high. Hence, prior to purchasing a commercial/residential property, it is important that all avenues are investigated to seek coverage for any potential water intrusion issue.

Most policies will provide coverage for sudden and accidental losses and not latent defects. Accordingly, it is important that any property owner seeks all possible coverages to protect them from personal liability in the event a mold claim is filed.

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***55 TOXIC BLACKACRE: APPRAISAL TECHNIQUES & CURRENT TRENDS IN VALUATION**
[FNa]

Lorraine Lewandrowski [FNaa]

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Lewandrowski

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***56 I. INTRODUCTION**

The double-edged sword of Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) [FN1] strict liability and depressed market value associated with pollution has impacted thousands of properties across the country. Ultimately, contamination costs must be weighed not only in environmental terms, but also in terms of the property's monetary value. Problems arise in valuing the impact of contamination on property in many contexts including determination of collateral worth in lending, property insurance, real property taxation, estate settlement, [FN2] financial reporting, [FN3] bankruptcy, condemnation [FN4] and even equitable distribution in matrimonial practice. [FN5] Concurrently, questions may arise concerning site remediation alternatives and their impact on the property's value. [FN6]

Government agencies and major institutions as well as individual property owners have begun to require appraisers, assessors and other valuers to identify and consider the impacts of environmental contamination during the real property valuation process. For example, the Federal Home Loan Mortgage Corporation (Freddie Mac) has begun to require appraisers to exercise environmental due diligence in the valuation of single family properties. [FN7] This puts the burden on appraisers, as the "eyes and ears" of lenders, to consider adverse environmental conditions affecting the property's value. Similar requirements of appraisers are seen in the practices of other lending institutions as well. [FN8] This due diligence requirement of lenders stresses the increasing impact of contamination *57 in the valuation of real property.

Land value litigation involving polluted properties has been marked by an ever-increasing analytical sophistication and attention to detail. During the past decade, courts have progressed from simply assigning a nominal value to a hazardous waste site with little or no reasoning, [FN9] to separating out a myriad of analytical valuation methods, in detailed opinions, for the appraisal of real property. [FN10] The art and science of contaminated property appraisal now combines engineering opinions, economic analysis, and legal concepts with adaptations of traditional valuation methods for contaminated sites. [FN11] At the same time, real estate market participants and real estate professionals (as potential litigants) are expanding their list of environmental variables which could enhance or impair property value. [FN12]

Despite significant progress in identification and management of site contamination, [FN13] the lack of an analytical framework for valuing environmental contamination damage to property and its ultimate impact on property value has generated further uncertainty associated with contaminated sites. This uncertainty is an impediment to many necessary functions that are associated with property management and investment return. Among these functions are alienability, insurability, and financeability of the property. This Article will concentrate primarily on economic valuation techniques which are being developed by real property professionals and the judiciary in land value litigation associated with contaminated properties. Hopefully, these improved methods of environmental problem identification, assessment, and valuation will alleviate some of the uncertainty associated with use and rehabilitation *58 of contaminated sites.

II. CLASSIC APPRAISAL TECHNIQUES FOR VALUE DETERMINATION

Professional appraisal standards require appraisers to consider each of three traditional valuation approaches to determine which is the most appropriate for the valuation of a particular property. [FN14] These are the cost approach, the income approach, and the sales comparison approach. [FN15]

A. The Cost Approach

The cost approach establishes the value of land in three steps. First, the appraiser, or court, must estimate the value of the underlying land. [FN16] To accomplish this goal, the appraiser must look at the recent sale prices of similar vacant parcels. [FN17] Second, the improvements and buildings on the land are valued. [FN18] This is achieved by determining the current cost of making these improvements and deducting from that cost a factor for obsolescence and physical depreciation. [FN19] This determination of improvement value is sometimes called the Replacement Cost New Less Depreciation (RCNLD) method. [FN20] Improvement value is then added to the value of the underlying land.

Properties which do not produce income and for which no comparable properties are available are good candidates for the cost *59 approach. [FN21] For example, a closed, 1,000-acre site specifically engineered and built to store and gradually solidify solvay wastes, with a tooth-paste like consistency, was recently characterized by the New York State Court of Appeals as a "specialty." [FN22] Specialty properties are those which are "uniquely adapted to the business conducted upon

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them or use made of them and cannot be converted to other uses without the expenditure of substantial sums of money." [FN23] The four attributes of a "specialty" property are

a) the improvement must be unique and must be specially built for the specific purpose for which it is designed; b) there must be a special use for which the improvement is designed and the improvement must be so specially used; c) there must be no market for the type of property and no sales of property for such use; and d) the improvement must be an appropriate improvement at the time of . . . assessment and its use must be economically feasible and reasonably expected to be replaced. [FN24]

They are often valued using the cost method because of the absence of a significant market and, therefore, comparable sales data. [FN25]

Appraisers may use several alternative methods to calculate the components of an RCNLD valuation. Construction costs may be estimated through such techniques as the comparative unit method (a summation of all direct and indirect costs divided by a measurable unit such as per square foot), [FN26] the unit-in-place method ("costing" all individual units such as foundation, plumbing, etc., then multiplying unit costs by number of units in a project), [FN27] the trended original or historical cost method (historic construction costs adjusted by construction cost indices), [FN28] and the quality survey method (itemization of labor and material and indirect costs typically used by construction cost estimators before construction). [FN29]

Similarly, depreciation calculations may vary as a reflection of depreciation type utilized in the appraisal. Depreciation calculations*60 may include: curable physical deterioration (decreases in utility which a prudent buyer would correct), incurable physical deterioration (a prudent buyer "would not feasibly or economically be justified in correcting"), [FN30] functional obsolescence (design deficiencies such as undercapacity or poor layout which creates a reduction in utility by current standards), [FN31] and economic obsolescence (utility reduction because of conditions outside of the property itself such as changes in surrounding land use, economic condition, government actions). [FN32]

B. The Income Approach

The income approach, sometimes called the economic approach, is useful only for properties which produce an income stream such as office buildings, shopping centers or apartment complexes. [FN33] The following formula is frequently used to express value in terms of the income producing ability of a particular property:

$$V = I/R$$

V = Value; I = Income; R = Discount or Capitalization Rate (The "capitalization rate" or "cap rate" expresses the present value of future income or benefits.) [FN34]

This approach assumes an investor would pay a certain value in order to obtain the benefits of a future income stream which will generate a necessary rate of return on the investment. [FN35] For example, an investor who would be attracted to a property generating \$100,000 in net income per year would be willing to pay \$1,000,000 at a 10% capitalization rate. [FN36] Using the income capitalization approach, a small change in the capitalization rate results in a large change in the property value. [FN37] Theoretically, the capitalization rate is influenced by four factors: 1) the "riskless" rate of return available from interest on long-term government bonds; 2) a compensation factor for loss of liquidity; 3) compensation for "investment*61 management"; and 4) compensation for risk. [FN38] While the first of these factors is a known rate, the other three are estimations. [FN39]

For contaminated property, factors such as the cost of cleanup, elevated operating, and monitoring expenses, as well as higher perceived risk are among the variables which will affect the calculation of final income streams and capitalization rates. [FN40] Income stream and capitalization rates adjusted for these environmental factors are then used to derive final value. [FN41] The following valuation example was developed by Peter Patchin in his seminal article on contaminated land valuation:

1) Valuation Before Discovery of Contamination

Patchin's example deals with an industrial property that is occupied and, prior to the discovery of contamination, generated a net market rental of \$100,000 per year. A capitalization rate of 10% was estimated using a technical calculation formula

known as the Ellwood method. [FN42] This capitalization rate calculation for the contaminated site combined various estimated components including an equity yield of 17% for similar types of industrial properties, a likely market appreciation of 3% per year for the site and an assumption of no loss of sales liquidity before the discovery of contamination. [FN43] Therefore, using the $V = I/R$ income approach formula, the property value (V) = \$100,000/0.10 or \$1,000,000. [FN44]

2) Valuation After Discovery of Contamination

With the discovery of contamination, although the site still has "value in use" as an industrial site, the property becomes unmarketable, having no "value in exchange." [FN45] Therefore, although net rentals continue at \$100,000, a much higher capitalization rate of 20% is estimated (also using the Ellwood method) to reflect additional risk factors associated with the site. [FN46] These include increased *62 equity yield necessary to attract site investors, higher mortgage rates (in cases where financing is still available) and decreased liquidity because of unmarketability. [FN47] Therefore, a value determination of \$500,000 utilizing the income approach is derived from the $\$500,000 = \$100,000/0.20$.

From Patchin's example, it is apparent that even with income rates continuing at pre-contaminated levels, changes in the capitalization rate to reflect increased risk associated with the property generate massive swings in site value.

C. The Sales Comparison Approach

The sales comparison approach (or market approach) compares similar properties which have been recently sold. [FN48] A basic set of property characteristics must be defined to classify properties being compared as well as environmental factors which affect property value in order to achieve accurate comparison of properties. [FN49] Typical property characteristics include: highest and best use, current use, and location, as well as physical characteristics. [FN50] Because of the need to consider these factors, the sales approach is most useful when adequate market data for the property exists. Adjustments for dissimilarities may be made when there are too few recent sales to enable comparisons. [FN51] When sufficient data exists for its use, the sales approach is the easiest to use and explain. According to Theodore Slack, one of the nation's leading appraisers, "courts like it, juries like it, and we appraisers like it." [FN52]

However, this popular appraisal technique may be difficult to apply to the valuation of certain contaminated properties since details about a particular property's contamination are generally specific to that property. [FN53] Therefore, adequate comparables are not likely to be available for unique and industrial type properties. For more ubiquitous properties such as single-family residences, advanced market research techniques may involve a comparison of *63 residential sales prices in entire neighborhoods, municipalities, or distance zones which are in proximity to a source of pollution with similar property groups in unaffected areas. [FN54] This type of analysis has been utilized for decades in valuing properties with environmental amenities and those in proximity to environmental amenities such as clean water or outdoor recreational areas. [FN55] Recently, though, similar analytical methods have been extended to the examination of impacts of negative environmental factors. [FN56] A large enough data base may exist for meaningful analysis of residential properties afflicted with detrimental environmental conditions such as the presence of radon, noise pollution, electric transmission lines, odor, radiation, or proximity to a CERCLA site. [FN57]

In these circumstances, the "systematic effect of the identified contaminant or hazard on property values" may be analyzed. [FN58] Valuers use a statistical method known as regression analysis to initially identify property characteristics such as location, neighborhoods, and timing of sales on a large number of properties. [FN59] In regression analysis, a matrix is developed consisting of the various attributes and detriments of the property (the variables affecting the property). [FN60] The regression matrix attempts to "isolate the effect that these independent variables have on the marketability and value of the property." [FN61] Thus, this method allows the court, or other valuation body, to depict the effects of contamination, as a single element, on a particular property's value. [FN62]

*64 This type of statistical analysis and mass appraisal is being used more frequently in recent years by appraisers, assessors, and economists as well as litigators. [FN63] For example, a statistical analysis was recently used to rebut property owners' claims of property value diminution within a five mile zone of a single radiation release. [FN64] The authors of the statistical study have predicted that the use of regression-based statistical analysis as a sophisticated sales comparison valuation technique will become more common in land value diminution claims, especially those associated with high-profile properties. [FN65]

III. DEVELOPMENT OF VALUATION CONCEPTS FOR CONTAMINATED PROPERTY

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The passage of CERCLA [FN66] and similar state statutes, such as the New York State Superfund, [FN67] forced property owners and property professionals to confront the monetary impact of contamination on property value. While thousands of sites are actually placed on the National Priority List, thousands more around the country are impacted by various degrees and types of contamination problems. [FN68]

In New York State, the "Love Canal" disaster provoked consideration of the distinction between pre-contamination and post-contamination property valuation. [FN69] In 1979, New York's Legislature provided for the outright purchase of parcels of real property which were in "a state of great and imminent peril to the health of *65 the general public" [FN70] Market value was to be determined "without consideration to any deleterious effects of the discovery of the danger to the general health" [FN71] Additionally, potential difficulties in marketing adjacent properties were recognized with the temporary extension of real property tax exemptions to surrounding properties. [FN72] These real property tax exemptions were extended by a six year phase out of tax exemptions in 1983, followed by a later two year extension of the real property tax exemptions. [FN73]

The New York State Board of Equalization and Assessment (SBEA) requires that the assessed value of a contaminated parcel be reached through "the evaluation of many factors, including its status as a 'Superfund' site, cleanup costs, the potential liability of the owner for cleanup costs, the likelihood of a lender being willing to finance the purchase of the property and the stigma remaining after the cleanup." [FN74]

Assessors and appraisers of many hazardous substance sites may be faced with an almost complete lack of market data. "Don't buy trouble" is the adage honored by many corporate real estate personnel who would not buy contaminated property at any price. [FN75] This admonition has been supplemented by "don't sell trouble" by some corporations which have resolved not to sell contaminated property in order to avoid contingent future liabilities. [FN76]

Properties listed on the Superfund present the worst case scenario and may be found to have no value at all. Peter Patchin's seminal article in 1988, Valuation of Contaminated Properties , noted the total unmarketability of Superfund sites where potential cleanup costs may grossly exceed the property's value. [FN77] In such case, "EPA and superfund cleanup will mark that property as an unmarketable pariah for years to come. [FN78]

For the thousands of properties which do not score greater than 28.5 in the EPA's Hazardous Ranking System which would warrant *66 placement on the National Priority List, Patchin concluded that "marketability is limited by clean-up costs, availability of an indemnity, higher equity yield demands to compensate for risk and higher financing costs because fewer lenders are willing to consider the property." [FN79] Drawing upon his experience as a professional appraiser of industrial and commercial real estate, Patchin has identified the following variables as paramount in the valuation of contaminated properties. These value-depressing factors are cleanup costs, liability, and the stigma which remains after cleanup. [FN80]

These three considerations have a significant impact on the various factors utilized when applying the classic valuation techniques to contaminated properties. For example, cleanup and monitoring costs and insurance for potential liabilities may exacerbate the expenses factored into the income-generating capabilities of a site. [FN81] Similarly, added liability insurance costs or liability to the public associated with a "release" may depress site income. [FN82] Finally, even when cleanup satisfies E.P.A. standards, a lingering perception of risk may "stigmatize" a property, rendering it unmarketable or unfinanceable. [FN83]

The stigma concept, a factor resulting in property value diminution, has recently been more fully developed in environmental appraisal literature [FN84] and is slowly being recognized by courts. [FN85] *67 While variables such as the cost to remove asbestos or contaminated soil are fairly quantifiable, stigma may be more ephemeral. In theory, one should be able to calculate the value of a post clean-up property by adding the value of the cost to cure [FN86] to the value of the "dirty property." [FN87] In reality, the lingering perception of stigma may continue to depress the property's value even after thorough cleanup. [FN88] This " 'residual stigma' . . . decreases over time as the public's perception of the risk subsides." [FN89]

Environmental stigma may be affected by 1) the disruption created by an environmental problem; 2) the concealability of the problem; 3) the aesthetic effects; 4) the person responsible for the contamination; 5) the prognosis for the site; 6) the degree of peril; and 7) the level of fear generated. [FN90] For example, the impacts of a leaking underground storage tank (LUST) have been contrasted with the Exxon Valdez oil spill in Prince William Sound by noting that the former may be

fairly contained, not causing off-site problems which may not be "seen, smelled or felt." [FN91] The Exxon Valdez spill, however, was not only highly disruptive to an entire ecosystem, but utterly inconceivable. [FN92] Additionally, while a LUST might contaminate an aquifer, the peril generated by the Exxon spill was multi-dimensional, impacting an entire food chain. [FN93] Stigma may be associated with technologies as varied as "petroleum processing, nuclear power plants and high voltage lines." [FN94] *68 Also, certain activities such as transportation of hazardous materials, [FN95] or final products such as Alar or petroleum-based products, may also be associated with stigma. [FN96]

There is a distinction between real risk and perceived risk in determining stigmatization of a property. [FN97] Real risk may be quantified with some degree of confidence. Hydrogeologists' studies of contamination containment at a site or cost-estimates for cleanup are examples of the quantification of risk. [FN98] However, perceived risk, "the risk seen by the public in the marketplace," [FN99] reflects a "disinclination to believe that a source of contamination is safe." [FN100]

Public perception of risk varies with 1) an environmental event's cause (greater perceived risk from drinking water contaminated by a leaking landfill versus lower perceived risk associated with voluntarily living down-stream from a dam); 2) the risk of catastrophe (level of risk associated with living near a nuclear reactor is higher than the perceived risk of living in a home which is affected by radon gas); and 3) the level of familiarity with the type of contamination (greater fear associated with PCB's than with smoking cigarettes even though more people die each year from smoking than from PCB exposure). [FN101] An example of the distinction between real and perceived risk was highlighted in a study of lending institutions *69 involving a sanitary landfill. [FN102] Although the landfill was scientifically demonstrated to be contained, a survey of twenty-five Pacific Northwest area lending institutions indicated that fifty percent of the lenders would not authorize loans on property adjacent to landfills for up to an average of ten years. [FN103] Finally, stigma resulting from an environmental problem may also vary with the degree of "risk amplification" resulting from the incident. [FN104] Risk amplification depends on media exposure of the incident, the extent to which a party or entity may be blamed for the event (as in the outrage generated by the specter of a drunken Captain Hazelwood commanding the Exxon Valdez), and the innocence of the environmental victim. [FN105]

Regulatory factors which indirectly affect contaminated property values include public and private restrictions upon the use and/or transfer of contaminated sites or even land adjacent to contaminated property. Environmental transfer laws enacted in a few jurisdictions may require certification that the property is contamination-free. [FN106] For example, under New Jersey's Environmental Cleanup Responsibility Act (ECRA), [FN107] property owners must certify to cleanup of a site during the closure, sale or transfer of "industrial establishments." [FN108] A dramatic example of the impact of restrictions on property adjacent to contaminated land is found in the California Health & Safety Code, section 25232, which forbids the construction of residential properties within 2,000 feet of contaminated property. [FN109] Similarly, "super liens" with priority *70 over other claims on the property (including mortgages) giving state agencies protection for public expenditures on cleanups may generate concern among potential lenders, further devaluing contaminated properties. [FN110] Finally, lending institutions' and insurance companies' cautious approach and refusal to deal with contaminated properties may depress or even destroy contaminated property values. [FN111]

IV. CONTAMINATED LAND VALUE LITIGATION

With the absence of any "surefire" analytical framework for property contamination, potential land valuation litigants have recognized the uncertainties associated with court decisions in the area. [FN112] Absolute proof of property devaluation may be almost impossible because of the difficulties and consulting expenses involved in quantifying intangibles such as stigma and estimating cleanup costs and future liability associated with a site. Consequently, some commentators believe that case law concerning contaminated property valuation is limited because of plaintiffs' recognition of the practical difficulties and expense of proof. [FN113]

State tax courts have provided the arena for the greatest number of valuation disputes as owners of contaminated properties have asserted their rights in challenging annual ad valorem property assessments. Tax courts have, however, been reluctant to place their imprimatur on a valuation method of contaminated property which would deprive localities of real property tax dollars or which would appear to reward polluters. [FN114] Judges in early valuation cases feared that decreasing a real property tax assessment to reflect contamination and cleanup costs would result in tax breaks for polluters through diminished assessments. [FN115] For example, one New Jersey appellate court took the "dirty dirt, dirty hands" approach in denying a decreased real property tax assessment to *71 owners of a contaminated site, holding that it would offend public policy to give tax breaks to polluters. [FN116] This "would be contrary to the legislatively formulated public policy of protecting the environment against toxic pollution." [FN117]

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Under the rubric of the public policy of environmental protection, representatives of some assessing units have argued the need for a departure from state constitutional imperatives of "true value" in property assessment. [FN118] These proponents of environmental policy (and opponents of any decreases in the tax base for the assessing units) have suggested a balancing test, weighing the environmental concerns of rewarding contaminated site owners with lower property tax assessments against the need for true value assessments which grant decreases in property assessments of contaminated parcels. [FN119] Using this balancing test, tax boards have sometimes found cleanup costs to be mere costs of doing business payable by the business (and, therefore, not attributed to the specific property's value) in order to avoid taxpayer "support of the cost of cleanup in the form of reduced taxes resulting from a reduced assessment." [FN120]

However, a recent IRS technical advice memorandum held that hazardous waste cleanup costs are not to be handled as deductions from current income. [FN121] Rather, these costs are to be "capitalized as an addition to depreciable facilities." [FN122] Under IRS Code section 263, soil remediation activities are considered to be permanent improvements to property, increasing property values. [FN123]

In rebuttal, one analogy offered by property owning taxpayers has been a comparison of two identical adjacent properties, one in perfect condition and the other containing a deep hole which requires extensive fill to make the property useful again. [FN124] It is argued that the value of the perfect parcel far exceeds that of the damaged one. [FN125] Similarly, property owning taxpayers argue that *72 contaminated property which may require cleanup expenditures should also be assessed at a lower value. [FN126] Tax authorities have countered that if this hole analogy applied to contaminated properties, a "taxpayer could purchase property, contaminate it to the extent of its value and subsequently use the property tax-free forever." [FN127]

The application of "fault" concepts and judicial concern over real property tax base diminution have been firmly rejected by several state courts as well as assessment professionals. The New York State Board of Equalization and Assessment (SBEA) cautions that assessing real property at more than its full (fair market) value to protect public coffers "runs afoul" of the New York State Constitution. [FN128] Ultimately, property assessment is to determine the "fair and realistic value of the property involved so that all property owners contribute equitably to the public fisc." [FN129] Other recent state tax decisions have also urged objectivity and fairness in valuing contaminated property regardless of the shift in tax burden away from polluters. [FN130] A recent Connecticut statute, however, does promote environmental policy concerns by forbidding any reduction in real property tax values because of contamination if the property owner did the contaminating. [FN131] However, it should be noted that Connecticut's state constitution does not include a mandatory property tax uniformity clause. [FN132]

The International Organization of Assessing Officers (IOAA), an influential assessor's organization, has also embraced the notion that "the assessor is not supposed to be the environmental police." [FN133] *73 The IOAA's 1992 Standard on the Valuation of Properties Affected by Environmental Contamination notes that the assessor is to focus on the true market value. [FN134] The public policy argument that polluters do not deserve tax breaks, "although having relevance in environmental policy," has no relevance in the property tax arena. [FN135] Property tax is to be based on market values without reference to "how good or bad the social causes are that created the present condition." [FN136]

Tax courts have also repeatedly held that the quantum of proof presented by property value litigants to establish the various factors used in traditional valuation methods is insufficient. Within tax courts, property owners challenging assessments usually face the "presumptive validity of assessments." [FN137] Taxpayers who fail to prove specific value components such as future cleanup costs [FN138] or the present value of the future benefits of a contaminated site [FN139] by a preponderance of the evidence will fail in their challenges of real property assessments on contaminated parcels.

One commentator has interpreted the high evidentiary standards *74 of tax courts as judicial avoidance of difficult value analysis. [FN140] However, it may be argued that litigants have not yet developed qualification techniques sufficient to establish value in this area. Property value litigation experts have urged that taxpayers provide documentation which is as complete as possible. [FN141] If documentation of contamination does not exist or other non-tax concerns (presumably from adverse publicity) exist, one commentator cautions that the property owner "may be better off treating excessive taxes as just another cost of living with a contamination problem." [FN142]

New York's State Board of Equalization and Assessment (SBEA) has noted that in valuing the impact of environmental laws such as wetland regulations [FN143] or hazardous waste cleanup requirements on real property assessments, reductions

may not be obtained "merely upon opinion evidence." [FN144] Rather, objective data must be presented as support for claimed assessment reductions. [FN145]

Considerable market data is usually necessary in order to apply each of the three classical appraisal techniques [FN146] as well as the modern applications to contaminated properties described above. [FN147] Therefore, these approaches may face severe limitations when applied to contaminated site evaluation. Courts have struggled to adapt classical valuation approaches to these uncertain valuation situations. At the same time, litigants have gained sophistication in presenting quantifiable data and expert witnesses to support proposed valuations. Several judicial approaches to the valuation problem have emerged, ranging from a simplistic judicial "gut reaction" approach to a "state of the art" analysis. [FN148] The following sections look at cases depicting the various approaches which have been undertaken by courts and espoused by commentators.

*75 A. Attributing Nominal Value to Site

A nominal amount, such as a value of one dollar, may be assigned to a site at the discretion of the court. [FN149] Nominal values have been assigned by the court in situations where it has been proven that the site is unmarketable at the time of the hearing. A judicial determination to attribute nominal value is often based upon a judge's sense of "fairness" in very fact-specific situations. [FN150] These include situations where the site is severely polluted with no hope of near-term cleanup [FN151] or where the property has become so hopelessly unmarketable that real estate brokerage firms refuse to even list the property. [FN152]

In one case, after sifting through exhaustive documentation on the impact of the discovery of more than 3,000 barrels of PCB-laden hazardous waste on a 340- acre parcel of agricultural land, a hearing officer recommended that, since there was a complete absence of sales dicta for hazardous waste sites and no known decisions in the tax division on valuation, a nominal value be given to the property. [FN153] Although the property was located within the prestigious Metamora Hunt Club, the plaintiff's appraiser believed the site to be unmarketable. [FN154] Using an appraisal originally developed for estate tax valuation, the appraiser pointed to 1) potential financial liability associated with owning the site; 2) toxic waste management costs on the site; and 3) uncertainties regarding future use of the land. [FN155] Although the site would be worth \$374,000 without contamination and had the capability of producing some income from cash crops, \$393,000 had already been spent on cleanup with Michigan Department of Natural Resources estimating an additional \$1.3 million in future cleanup costs. [FN156] In analyzing the "scourge of toxicity" on property value, this court recommended that one could only "search his/her own conscience in an effort to arrive at a determination that is fair." [FN157]

*76 In another case involving three residential building lots, a property owner testified that she had been forced to abandon her residence because of benzene contamination and that she was unable to sell or rent her property because commercial real estate firms refused to list her properties. [FN158] An expert real estate appraiser, whose opinion was that the benzene contamination rendered the lots unmarketable with a nominal value of one dollar, supported her testimony. [FN159] With no rebuttal offered by the lower tax board, the court found the nominal valuation to be supported by the taxpayer's "substantial evidence." [FN160]

When attributing nominal value to a site, courts have emphasized that the nominal value holding is limited to the facts of the case and that the site value may be restored upon cleanup. [FN161] For example, in basing value determinations upon total non-utility of a former hazardous waste disposal site, which as a matter of law could not be used for anything else, a Michigan tax tribunal ascribed a nominal value to the parcel. [FN162] While the tribunal cautioned that contaminated site valuations must be made on a case by case basis, the value of the property was expected to rebound upon cleanup. [FN163] Therefore, at that time, site value would be restored. [FN164]

B. Future Benefit Analysis

While the courts may attribute nominal value to presently unusable sites, when site rehabilitation is foreseen the present value of benefits which may accrue to the site upon cleanup may be calculated. [FN165] In Appeal of Great Lakes Container Corp. , [FN166] a property assessment of \$224,150 on a closed and severely contaminated barrel reconditioning plant was upheld by the New Hampshire Supreme Court even though millions of dollars of cleanup *77 liabilities were attached to the site. [FN167] The Great Lakes Container Corporation (GLCC) argued that traditional appraisal methods could not apply to land which was unsellable and, therefore, untaxable. [FN168] GLCC conceded that it was seeking tax abatement rather than forfeiting the site to the town because it was "probable" that the site could have some post-remediation sale value. [FN169] The Supreme Court of New Hampshire agreed with the tax board's conclusion that GLCC's refusal to forfeit the land was an

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indication that GLCC itself believed that there was some "present value to the future benefit" of owning the site. [FN170] When GLCC failed "to provide evidence from which a reasonably certain calculation of present value could be made," the Supreme Court denied GLCC's real property tax abatement appeal. [FN171]

Evidence that GLCC had attempted to sell the site for \$350,000 even after the federal suit for cleanup had been filed was used to uphold the lower tax board's assessment. [FN172] The court noted that a different result might have been reached if GLCC had made an unsuccessful, good faith effort to sell the property for less than its assessed value after initiation of the federal suit. [FN173] The court concluded that:

[N]othing prevented GLCC from agreeing to sell the land with transfer of title deferred until after completion of any court-mandated cleanup, thus freeing the buyer from any possible liability due to the contamination. It was therefore reasonable for the board to conclude that the property had some sale value. [FN174]

Therefore, in light of the possibility of a future sale, the court found the existing assessment of \$224,500 to be reasonable. [FN175]

The Washington Board of Tax Appeals applied a similar analysis of the value "created by the expectation of benefits to be derived in the future" in upholding a tax assessment on a closed wood-waste fill site on the Superfund list. [FN176] Despite serious arsenic *78 contamination, the 19.65-acre property was initially assessed at \$117,000 in 1985. [FN177] Although the County Board of Equalization reduced the assessed value to \$19,700, the taxpayer persisted in her challenge, claiming that the property's value was zero because it was unmarketable. [FN178] As a result, companies whose woodfill had been dumped at the site were committed to bear eighty percent of the cost of a ten to fifteen year cleanup program which was estimated to run from \$48,000 to \$157,000 per acre. [FN179]

Since others were committed in writing to bear the cleanup cost and it was likely that a prospective purchaser would seek seller indemnification, the court reasoned that a prospective purchaser would not be responsible for cleanup. [FN180] The court noted that a purchaser would not discount its offering price by the cost of cleanup, but would discount its offering price for the time the property remained unusable. [FN181]

Noting the lack of consensus within the appraisal profession in estimating contaminated property value, [FN182] the court suggested an adherence to "the basic principles of anticipation." [FN183] The court agreed with the assessor that a potential buyer would be purchasing the future use benefit of this site when it became usable once again. [FN184] Therefore, the court settled upon future benefit analysis *79 which included:

[t]he ability to derive income from future use of the property and from future sale of the property to another. The traditional method of measuring the present worth of future benefits is the application of a discount rate to future value for the period of time until the benefits are received. [FN185]

The court estimated that future income benefits would begin to flow in the year 2004, when cleanup was scheduled to be completed. [FN186] The parties stipulated that the "clean" value of the site as of the trial date in 1989 would have been \$10,000 per acre. [FN187] The court further assumed that the value of the property would also be \$10,000 in its post-cleanup state in 2004. [FN188]

Using the income approach ($V = I/R$) through the application of an estimated capitalization rate of 10% for fifteen years, the court valued the 19.5-acre site at \$22,393. [FN189] The court raised the capitalization rate from the typical 8% to 10% in order to account for the additional risk associated with property. [FN190] These risks included the risk that the property might not be cleaned up by the year 2004 or the risk of lingering environmental stigma. [FN191]

The local assessor had attempted to value the site on the basis of comparable sales of uncontaminated parcels adjusted from \$10,000 to \$1,000 per acre to account for contamination, yielding a \$19,000 total assessed valuation. [FN192] Since the court's own value calculation of \$22,293 was higher than the assessor's determination, the court held that the assessor's determination was "not excessive." [FN193]

C. Discounted Cash Flow Method

Another variation of the income capitalization approach is the development of the discounted cash flow (DCF) method for contaminated properties. The DCF method attempts to estimate the *80 net income of a contaminated property over a particular time period. [FN194] Computing net income involves the determination of the anticipated quantity, timing, and

duration of income in each future year resulting from changing variables such as future rents, vacancies, and expenses. [FN195] Additionally, market value for the property at the end of the period, also known as the reversionary value, is estimated. [FN196] These components are then added together and discounted, using a selected rate of interest, or yield rate, to determine the present value of the property. [FN197]

The DCF income approach technique is most frequently used in valuing commercial properties. [FN198] This method has become more popular recently since it expands upon the traditional direct income capitalization approach, [FN199] which operates through the simple formula of $V = I/R$, using only one set of income parameters. DCF adds an intertemporal dimension in that it is able to digest multiple sets of income and expense figures to reflect changing market conditions. "DCF allows you to project a time when the net income will be above the value for the commercial property." [FN200] One disadvantage of the DCF method is that the final value figure is based upon many assumptions. [FN201] Also, the method may be difficult *81 to explain in the courtroom setting. [FN202] Benjamin Smith, a valuation practitioner and attorney, concludes that the "best approach for a DCF analysis is to use it only as one of several income valuation techniques." [FN203]

D. Modified Income Approach for Functioning Properties

In *Northwest Cooperage Co. v. Ridder*, [FN204] a case involving a large contaminated ongoing industrial drum recycling facility located adjacent to a river, the Washington Board of Tax Appeals acknowledged that contamination is much more than a simple business expense. [FN205] Instead, the Board saw remediation and monitoring costs as a "an expense running with the land." [FN206] The taxpayer, Northwest Cooperage Company (NWC), might have argued that if contamination costs ran with the land, cleanup costs should then be deducted from fair market value. But since NWC did not make such an argument, the Board did not reach this issue. [FN207]

NWC argued that the property was "unmarketable" in its current contaminated condition because cleanup costs exceeded the price that a purchaser would pay for an equivalent uncontaminated property and because of uncertainties over future liability to the public, cleanup costs and unavailable financing. [FN208] Therefore, the property had no market value or "value in exchange." [FN209] The Tax Board rejected the use of lack of "value in exchange" for the property, holding instead that the property had "value in use" to NWC as an ongoing business. [FN210]

*82 Quoting Patchin's valuation hypothesis that "unmarketable" does not necessarily equate to "worthless," the court instead crafted a modified income approach tailored to an ongoing business where the capitalization rate reflected added risk associated with the site and net income was decreased to accommodate extraordinary expenses. [FN211] The court painstakingly considered a myriad of business factors affecting each of the income approach components. These included increasing the capitalization rate to reflect increased risk of public liability associated with possible river and groundwater contamination, additional pollution monitoring, legal expenses, and increased management expenses associated with contamination problems. [FN212]

An attempt to adjust economic rents and increased vacancy rates of the property to reflect stigma associated with the site by NWC's appraiser, Bill Mundy, [FN213] was rejected by the court. [FN214] Stigma was held to be not intuitively associated with the current industrial activity that could be carried out on the premises. [FN215]

E. Discounting for Remediation Costs

Remediation costs may be held to actually decrease the market value of property. [FN216] However, sufficient proof must be presented by the property owner to support such a determination. [FN217] In *Firestone v. County of Monterey*, [FN218] the owner of a recently-closed, two million square foot tire manufacturing facility with an asbestos contaminated plant and soil and ground water contamination sought an assessment reduction. [FN219] Although not officially designated as a "hazardous waste property" by the California Department of Health Services (DHS), Firestone had been advised that no "new use" or sale of the property would be allowed until a final *83 plan for hazardous waste removal had been approved by the state. [FN220] The local assessor has valued the plant using the "replacement cost" method of valuation favored for large, unique, and complicated pieces of industrial property. [FN221]

In an extensive discussion on the appropriate standard of review of valuation methods, the court concluded that a trial court must determine whether the valuation method is "arbitrary, in excess of discretion, or in violation of the standards prescribed by law." [FN222] The court held that "substantial evidence" supported the trial court's conclusion that a "reasonable person, acting reasonably, might well have valued Firestone's property in the same manner as the assessor." [FN223]

Monterey County argued that an estimated six million dollars in pollution cleanup costs do not "run with the land" and, therefore, would not affect the property's market value of roughly thirty-one million dollars. [FN224] The county contended that cleanup costs are not part of the "fee simple unencumbered rights" on which tax assessments are based, that liability for cleanup costs belongs to the polluting generators themselves, and that groundwater contamination is a damage to the general public. [FN225] The court rejected the county's arguments, although it noted in dicta that the fair market value of property for tax assessment purposes may be reduced by the cleanup costs. [FN226] Firestone failed to receive a tax abatement, however, since it had entered insufficient proof that the assessor knew of the contamination of the property at the time of the assessment. [FN227]

The concept of deducting remediation costs from property value has been utilized by other courts around the country. [FN228] The most *84 comprehensive judicial discussion to date of the impact of contamination on real property values occurred in *Inmar Associates v. Borough of Carlstadt*, [FN229] a case of first impression determining the impact of New Jersey's Environmental Cleanup Responsibility Act (ECRA) upon property value. [FN230] ECRA's requirement that contaminated industrial land be cleaned up before its sale is permitted added another dimension to the valuation analysis. Despite the *85 consideration of various valuation concepts contained within amicus curiae briefs from the affected legal community and the government and a thorough analysis of various approaches, the Supreme Court of New Jersey was unable to develop a definitive valuation approach for a federal Superfund site located on 5.9 choice acres in the Hackensack Meadowlands near the Meadowland's Sports Complex. [FN231]

Although the owner guessed that the final cleanup cost would be \$2.5 million, neither the assessor nor the owner could ascertain the full extent of cleanup costs with certainty. [FN232] Inmar's owner contended the property value was zero since it was absolutely unmarketable as a Superfund site with an uncertain cost determination. [FN233] The Inmar opinion contains what has been characterized as two contradictory lines of reasoning regarding contaminated property valuation. [FN234] First, in countering the municipality's argument that ECRA's impact on property value should be ignored, the court reasoned that regulatory programs such as ECRA and CERCLA "undoubtedly affect the true value of real property." [FN235] On the other hand, the court characterized ECRA and CERCLA remediation costs as a regulatory cost of doing business, therefore not affecting the inherent value imputed to the property. [FN236]

The court attempted to develop an analogy comparing one property owner who had managed the site with "extremely high standards of industrial cleanliness," sacrificing profits over the years, [FN237] with another company which deferred its property maintenance until it attempted to sell the land: [FN238] "In either case the cost must be incurred either as you go or before you sell. In neither case would the price that a willing buyer would pay to the willing seller be different." [FN239] The court reasoned that to simply deduct the cost of curing contamination on the property on a dollar-for-dollar basis would only reflect the owner's cost accounting methods. [FN240] An owner could manipulate property value by advancing or postponing *86 remediation scheduling. While this reasoning may have validity for accounting for pollution cleanup costs in an ongoing business, it is not applicable to closed facilities which are not generating any income streams to be manipulated.

At the same time, the court recognized the possibility that statutes such as CERCLA and ECRA could stimulate market forces driving down the inherent value of properties subject to cleanup costs. [FN241] Another possible approach suggested by the court was the valuation of the site as a "specialty." [FN242] The court indicated that the relaxation of the rules of evidence and comparability sometimes associated with specialty valuation might have particular applicability in valuation of uniquely contaminated sites. [FN243] Finally, the court suggested the possible validity of amortizing the cost to cure the contaminated property over the useful life of the property, treating it as a capital improvement. [FN244] Although this approach had not been followed in the tax court below, the court declared that it contained the "seeds of a useful doctrine." [FN245] In the end, though, the Inmar court recognized that some sort of "adjustment" was in order and being unable to quantify that adjustment itself, remanded the case for the "unique capability" [FN246] of the tax court and the "competence of the appraisal community" to solve. [FN247]

F. Valuation as a Specialty

A good example of the valuation of a parcel of land as a specialty [FN248] is found in a recent New York case involving a 1,000-acre site (owned by Allied Corporation) consisting of "mesa-like" earthen-walled wastebeds used as holding and settling/solidification facilities for solvay wastes, New York's Court of Appeals approved of the use of the RCNLD valuation method. [FN249] Labeling the *87 site as a "specialty," [FN250] the court upheld the assessor's valuation of \$4,800 per acre while denying the site owner's appraisal of \$60 to \$400 per acre. [FN251] At the state supreme court level, Allied had

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succeeded in obtaining a lower assessment through the use of comparable sales data from a specific parcel of "swampland." [FN252] The court did comment, however, that the RCNLD method has been used with caution because of its tendency to result in over-evaluation by ascribing "too little weight to such factors as rising construction costs and diminishing value by functional obsolescence." [FN253]

The site's characteristics were shoe-horned by the court into the four-part test usually used when defining "specialty" properties: 1) specially built for the use; 2) special use for the design; 3) no market or sales date for the property; and 4) economic feasibility of use. [FN254] The wastebeds were likened to storage facilities: "no different from warehouses of storage silos that have become filled to capacity," [FN255] being used for special storage use even though no new material was currently being added. [FN256] The site's design, including operational drainage ditches and lagoons, indicated the owners intention to design and use the site as a long-term specialized storage and solidification facility. [FN257] Since the waterbeds were still in use for waste storage they were considered economically feasible. [FN258] The court reasoned that, "Allied was required to store the waste somewhere-if not here, somewhere else." [FN259]

G. Valuation of Contaminated Properties Through the Sales Method

The "fingerprint" uniqueness of many contaminated sites has not lent itself to the use of the sales comparable method in commercial *88 and industrial properties. [FN260] However, as noted earlier in this Article, we have seen the beginning of the employment of advanced market analysis such as the use of multiple-regression analysis for large numbers of residential properties. [FN261]

V. VALUING PROPERTY NEAR OR ADJACENT TO CONTAMINATED SITES

Owners of properties which are near or adjacent to contaminated sites or waste facilities may claim that although their properties are not contaminated or polluted with hazardous materials, the properties have diminished in value. [FN262] This stigma value has been recognized by some courts in granting real property tax assessment reductions for diminution in property value caused by proximity to contaminated sites, those perceived to be contaminated, or those negatively impacted by a technology which generates public fear. [FN263] Michigan residents in close proximity to heavily contaminated land were allowed a decrease in assessed valuation of their properties even though they were not able to provide comparable sales data. [FN264] The absence of residential sales in the landfill vicinity was interpreted by the court to mean an unmarketability of the properties. [FN265] Although the court emphasized that assessed valuation had been reduced because of the perceived loss of value because of *89 proximity to the landfill value, value determinations based on stigma must be made on a case by case basis. [FN266]

While challenges to real property assessments may be allowed without proof of contamination on the subject property itself, public nuisance suits alleging diminution in property values may not be. In *Adkins v. Thomas Solvent Co.*, [FN267] after the plaintiff's expert testified that no contaminants from a local solvent facility had reached the subject property, the court dismissed the property owner's claim of diminution in property values due to "public concern" or "stigma," [FN268] the court refused to expand the boundaries of public nuisance concepts to depressed market valuation. [FN269]

The New York Court of Appeals recently recognized that individuals who claim that the public's fear of electromagnetic radiation from high voltage power lines destroyed the value of their property do not have to establish the reasonableness of such fears. [FN270] Judge Bellacosa wrote for the court:

We are satisfied that there should be no requirement that the claimant, as a separate and higher value component of its market value proofs, must establish the reasonableness of a fear or perception of danger or of health risks from exposure to high voltage power lines. The issue . . . is whether or not the market value has been adversely affected. This consequence may be present even if the public's fear is unreasonable. [FN271]

Although a showing of the reasonableness of the fear is not required, the court recognized that "[s]ome credible, tangible evidence that a fear is prevalent" must still be shown before the court will recognize an adverse market impact on the property. [FN272]

In addition to the stigma associated with being near a contaminated site, or one perceived to be contaminated, negative economic *90 impacts have also been associated with the mere siting of solid waste facilities. [FN273] When solid waste facilities are sited in "host" communities by private or government developers, a Wisconsin statute provides for arbitration regarding "compensation to any person for substantial economic impacts which are the direct result of the facility." [FN274] Similarly, at least one New York court has recognized the potential for diminished property values for property located

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contiguous to candidate landfill sites. [FN275] In that case, the plaintiff's appraiser had valued a 61-acre tract located adjacent to a proposed municipal solid waste site at \$40,000, while the assessor placed a value at \$656,148 based on comparable sites unaffected by the spectre of a regional landfill. [FN276] Rejecting the use of recent comparable sales of properties not affected by the uncertainty of a neighboring landfill operation, which would "have an extremely adverse effect on the surrounding neighborhood," [FN277] the plaintiff's appraiser testified that:

As the site begins to fill up it rises above the tree line like a swollen boil on the landscape; a sight that can be seen for miles. Flocks of seagulls and other birds are attracted for the garbage that is inevitable (sic) included in the dumping. Eventually seepage from the dumping pollutes the groundwater and creates pockets of poisonous gas which has been known to seep into nearby dwellings. [FN278]

The court ruled that the real property tax assessment should be reduced to take into account the decrease in market value because of the "prospect of the landfill operation." [FN279]

The potential for diminution in property values associated with solid waste disposal facilities has been implicitly recognized in a variety of "property value protection programs" developed in conjunction with some of new municipal solid waste facilities. [FN280] In *91 New York, Tompkins County has been a pioneer in identifying and dealing with property value concerns of residents of Dryden, the "host" community for the Tompkins County Landfill. Following a public opinion survey in which more than ninety percent of property owners identified free water tests, guarantees to replace water, enforcement of speed limits, independent property appraisals, monitoring well reports, and property value protection among the top ten benefits which they would like to receive because of proximity to the new landfill, [FN281] a formal property value program, recognizing the property-depressing affect of a regional landfill, was developed in response to the needs of Dryden residents. [FN282] Although not implemented to date, the plan provides that the residents of this rural community would receive benefits for hosting the landfill and written assurances of compensation for any property value diminution associated with the parcel's proximity to the landfill. [FN283]

Comprehensive assessment studies on property value diminution in other settings, such as the impact of the release of radioactive materials, have indicated that market value data may not support claims of decreases in property value in response to all environmental conditions. [FN284] A market research study spanning from two years before to two years after the announcement that an industrial facility had emitted several hundred pounds of low-level radioactive powder compared property sales in a large surrounding area. [FN285] Residents within a five mile radius had filed a class-action damage suit claiming property value losses in addition to fear of health hazards. [FN286] Local assessors in nearby assessing units who were petitioned to drop assessment values responded in a variety of ways from granting across the board twenty percent assessment reduction to no reduction at all. [FN287] The market value study conducted for the region failed to detect any decrease in property values *92 attributable to the release. [FN288]

The most interesting adjacent property suits are increasingly involving large numbers of property owners located near hazardous sites. These suits, often claiming diminution in property values because of real or perceived risk associated with the site, may involve large numbers of litigants as well as complex evidentiary problems in proving value diminution and damages claims. A recent example of this type of adjacent property owner case was brought in a class action suit filed by 15,000 individuals near the Rocky Flats nuclear weapons facility seeking \$250 million for diminished property values, \$150 million for medical monitoring funds, and \$300 million for punitive damages and CERCLA response costs. [FN289]

VI. CONCLUSION

The environmental revolution of past decades has prompted consideration of environmental impacts on property value in settings as varied as Prince William Sound in Alaska to the leaking underground storage tank at the corner service-station. The fields of appraisal science and conventional economics have been forced to add an environmental dimension to analysis. The increasing use of the identification and quantification techniques of environmental problems through environmental audits [FN290] and the due diligence of assessors has led to consideration of new environmental factors [FN291] and has been paralleled by the more sophisticated use of valuation concepts in determining the value of properties which have been influenced by negative, or positive, environmental characteristics. Although this Article has concentrated on environmental conditions detrimental to property values, concepts in valuing *93 the impact of environmental benefits on property values are rapidly being developed as well. [FN292]

As techniques in valuing contaminated properties become more widely known, courts will no longer tolerate attorneys who fail to properly substantiate property diminution claims for such properties. For example, a Michigan judge recently

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sanctioned a plaintiff's attorney who did not support allegations of property value diminution resulting from pesticide application. [FN293] It is anticipated that environmental attorneys will expand their application of valuation concepts as well as their use of experts knowledgeable in these areas of valuation sciences. [FN294] To do so will not only enable attorneys to better serve their clients in land valuation litigation, but will also facilitate the development of public policy which gives full consideration to marketplace reactions associated with environmental concerns.

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[FN1] 42 U.S.C. § § 9601-9657 (1988 & Supp. 1992). CERCLA is the primary federal statute used to clean up hazardous substances from contaminated property.

[FN2] Bar Members Suggest Special Estate Tax Rules for "Contaminated Family Enterprises"-Section 2031 , 92 TNT 120-36, June 10, 1992.

[FN3] Robert F. Wall & Joseph G. Homsy, Environmental Reporting Required by the Securities and Exchange Commission , Toxics L. Rep. , Dec. 11, 1991, at 850-56.

[FN4] For a thorough discussion of valuation of contaminated properties in the context of condemnation, see Robert I. McMurry & David H. Pierce, Environmental Redemption and Eminent Domain, in Eminent Domain and Land Value Litigation , ALI-ABA Symposium, Ft. Lauderdale, Florida at 105-48 (Jan. 9-11, 1991).

[FN5] Robert A. Gladstone, Contaminated Property: A Valuation Perspective , Toxics L. Rep. , Nov. 27, 1991, at 798.

[FN6] See James Denn , Firm Sues G.E. Over PCB's , Alb. Times Union , June 10, 1993, at B-1.

[FN7] Mark J. Bennet & Ronald D. Miller, Environmental Risk: Are Your Loans Marketable? , Toxics L. Rep. , Oct. 12, 1988, at 621.

[FN8] Id. at 619-21.

[FN9] An example of this approach is found in *Commercia Bank-Detroit v. Metamora Township*, 1989 Mich. Tax LEXIS 12, at *17 (May 12 1989), where, after extensive testimony on the negative impacts of PCB contamination on a 340-acre parcel of land, the court concluded that "soul-searching" offered the best route to a determination of nominal value in the interests of fairness. Id.

[FN10] Following the extensive solicitation of amicus curiae briefs, the New Jersey Supreme Court in *Inmar Assoc., Inc. v. Borough of Carlstadt* , 549 A.2d 38 (N.J. 1988), offered sophisticated analytical alternatives in its first interpretation of the impact of New Jersey's Environmental Cleanup Responsibility Act (ECRA) on property values. See *infra* notes 211-28.

[FN11] See James A. Chalmers & Scott A. Roehr, Issues in the Valuation of Contaminated Property , Appraisal J. , Jan. 1993, at 28.

[FN12] See Ronald D. Miller & Mark J. Bennet, Due Diligence Techniques for the Innocent Purchaser/Lender , Toxics L. Rep. , Aug. 31, 1988, at 434.

[FN13] Symposium, Acquiring Problem Properties: Managing Environmental Risk, Practicing Law Institute (1990).

[FN14] Theodore C. Slack, Valuation Principles for Lawyers, in Eminent Domain and Land Value Litigation , ALI-ABA Symposium, Ft. Lauderdale, Florida (Jan. 9-11, 1992), at 65. These appraisal standards have been developed by the Appraisal Institute as well as the Appraisal Foundation, a group of several appraisal organizations.

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[FN15] Id.

[FN16] International Association of Assessing Officers, Improving Real Property Assessment, A Reference Manual, at 36 (1978) [hereinafter Improving Real Property Assessment].

[FN17] Id . at 36-37; see also Slack , supra note 14, at 66.

[FN18] Improving Real Property Assessment , supra note 16, at 37.

[FN19] Id.

[FN20] Improving Real Property Assessment , supra note 16, at 166. A distinction is made between reproduction cost and replacement cost. Although these terms are often used synonymously, they have different meanings for professional appraisers. Reproduction refers to the current cost to replicate an improvement with the same materials, workmanship, and construction standards. Id . Replacement refers to the construction of a substitute structure. Id . Although the utility of this structure should be identical, it may be constructed of currently available materials using current design and construction standards. Id.

[FN21] Id . at 37.

[FN22] Allied Corp. v. Town of Camillus, 604 N.E.2d 1348, 1352 (N.Y. 1992).

[FN23] Great Atlantic & Pacific Tea Co. v. Kiernan, 366 N.E.2d 808, 811 (N.Y. 1977).

[FN24] Allied Corp ., 604 N.E.2d at 1351.

[FN25] Great Atlantic & Pacific Tea Co. , 366 N.E.2d at 808, 812.

[FN26] Improving Real Property Assessment , supra note 16, at 165.

[FN27] Id.

[FN28] Id . at 165, 166.

[FN29] Id.

[FN30] Id . at 167.

[FN31] Id .

[FN32] Id.

[FN33] Gladstone, supra note 5, at 799.

[FN34] Improving Real Property Assessment , supra note 16, at 258.

[FN35] Id . at 38.

[FN36] Peter J. Patchin, Valuation of Contaminated Properties , Appraisal J., J an. 1988, at 7, 14.

[FN37] Improving Real Property Assessment , supra note 16, at 38.

[FN38] Id . at 295.

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[FN39] Id.

[FN40] See Patchin, *supra* note 36, at 13.

[FN41] Id. at 14.

[FN42] Id. at 13-14. The Ellwood method is a standard appraisal tool which employs a mathematical formula integrating an estimated equity yield, possible market appreciation as well as a factor for liquidity into capitalization rate calculation. Id.

[FN43] Id.

[FN44] Id.

[FN45] Id.

[FN46] Id.

[FN47] Id.

[FN48] Id. at 37.

[FN49] Id.

[FN50] Id.

[FN51] Slack, *supra* note 14, at 66; see also Financial Institutions Reform, Recovery, and Enforcement Act of 1989, Pub. L. No. 101-73, 103 Stat. 183 (1989) (codified as amended at 12 U.S.C. §§ 3310, 3331-3351 (1989)); Bank Holding Company Act § 5(b), 12 U.S.C. § 1844(b) (1956).

[FN52] Slack, *supra* note 14, at 66.

[FN53] Gladstone, *supra* note 5, at 799.

[FN54] Interview with Sharon Brooks, Senior Economist, New York State Department of Environmental Conservation, Natural Resources Damages Unit, in Albany, NY (June 21, 1993).

[FN55] See, e.g., Melville McMillan, Comment, Measuring Benefits Generated by Urban Water Park, 4 Land Economics 379-81 (1975). Following the recent Supreme Court decision in Lucas v. South Carolina Coastal Council, 112 S. Ct. 2886 (1992), two authors attempted to measure the monetary benefits which could be capitalized in a market price of property as a result of storm protection and recreational opportunities associated with wider beaches. See Jeffrey J. Pompe & James R. Rinehart, Estimating the Effect of Wider Beaches on Coastal Housing Prices, 22 Ocean & Coastal Management 141, 141-152 (1994).

[FN56] Interview with Sharon Brooks, Senior Economist, New York State Department of Environmental Conservation, Natural Resources Damages Unit, in Albany, NY (June 8, 1993).

[FN57] Chalmers & Roehr, *supra* note 11, at 28.

[FN58] Id. at 37.

[FN59] Id. Regression analysis is a statistical method which enables one to "isolate the effects of one variable independent of the effects of other variables." Id.

[FN60] Id.

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[FN61] Vincent D'Elia & Catherine M. Ward, The Valuation of Contaminated Property, 111 Banking L.J. 350, 362-63 (1994).

[FN62] See Chalmers & Roehr, *supra* note 11, at 37.

[FN63] Laura L. Svitek, Natural Resource Damage Assessment Under CERCLA: Economic Valuation Concepts & Methodology & Survey of Restoration Issues, at 72, prepared for the N.Y.S. Dept. of Env'tl. Conservation (1989) (citing Chris Zeiss & James Atwater, Waste Facility Impacts on Residential Property Values, 115 J. Urb. Plan. and Dev. 123 (1989)).

[FN64] See William N. Kinnard, Jr. et al., Market Reactions to an Announced Release of Radioactive Materials: The Impact on Assessable Value, 15 Assessment Dig. 18, (Jan./Feb., 1993).

[FN65] *Id.*

[FN66] Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Pub. L. No. 96-510, 94 Stat. 2767-2811 (codified as amended at 42 U.S.C. § 9601-9657 (1988 & Supp. 1992)).

[FN67] N.Y. Env'tl. Conserv. L aw § 27-1301 (McKinney 1984 & Supp. 1994).

[FN68] The National Priority List, also known as the "Superfund List," is mandated by law, 42 U.S.C. § 9605(8) (1988 & Supp. 1992), and consists only of properties which are considered "priorities" for cleanup in response to contamination. Id . The list is created by the President and updated annually, taking into account "the relative risk or danger to public health or welfare or the environment." 42 U.S.C. § 9608(8)(A).

[FN69] See N.Y. Real Prop. Tax Law § § 1700-1706 (McKinney 1989).

[FN70] *Id.* § 1700 (McKinney 1989).

[FN71] *Id.*

[FN72] N.Y. Real Prop. Tax L aw § 1700-1706 (McKinney 1989).

[FN73] *Id.* § 1700.

[FN74] 9 Op. Counsel SBEA No. 58, at 1 (Jan. 18, 1989, revised April 1992) (citing N.Y. Real Prop. T ax L aw § 305 (McKinney 1984) (Assessment Methods and Standards); N.Y. Env'tl. Conserv. L aw § 27-0303 (McKinney 1984 & Supp. 1994) (Definitions of Hazardous Waste)).

[FN75] Patchin, *supra* note 36, at 7.

[FN76] *Id.*

[FN77] *Id.*

[FN78] SCA Servs. of Ind. v. Thomas, 634 F. Supp. 1355, 1364 (N.D. Ind. 1986).

[FN79] Patchin , *supra* note 36, at 8-10.

[FN80] *Id.* at 11.

[FN81] See Kenneth F. McCallion, A Survey of Approaches to Assessing Damages to Contaminated Private Property, 3 Ford. Env. L. Rep. 125, 130 (1992) (citing A. Myrick Freeman, III & Raymond J. Koop, Assessing Damages From The Valdez Oil Spill, Resources, Summer 1989, at 5, 5).

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[FN82] Id. at 12.

[FN83] Bill Mundy, Stigma and Value , Appraisal J. , Jan., 1992, at 9.

[FN84] Id ; see also Michael R. Edelstein, Contaminated Communities: The Social and Psychological Impacts of Residential Toxic Exposure (1988); Chalmers & Roehr, supra note 11, at 28-41; William N. Kinnard, Analyzing the Stigma Effect of Proximity to a Hazardous Materials Site , Environmental Watch 4-7, Dec. 1989; Peter J. Patchin, Contaminated Properties-Stigma Revisited , Appraisal J. , April, 1991; Maxwell O. Ramsland, Jr., An Asbestos Assessment Model; A Valuation Methodology for Appraisers , Environmental Watch , Spring 1990, at 2-4.

[FN85] See D'Elia & Ward, supra note 61. "Judicial recognition that there may be a reduction in market value because of the existence of environmental contamination has been slow in coming." Id . at 350. For examples of cases where the courts have begun to recognize stigma as a possible factor in valuation, see Westling v. County of Mille Lacs, 512 N.W.2d 863, 865-66 (Minn. 1994); City of Olathe v. Stott, 861 P.2d 1287 (Kan. 1993) (discussing stigma as a factor used in assessing property value); Northwest Cooperage Co. v. Ridder, 1990 Wash. Tax LEXIS at *1, *42; Inmar Assoc. v. Borough of Carlstadt, 549 A.2d 38 (N.J. Sup. Ct. 1988).

[FN86] One commentator, Albert Wilson, President of the Hazardous Materials Literature Institute, has noted that the "cost to cure" is not an appropriate term in environmental litigation since in some instances it may not really be known if a problem is cured. Albert Wilson, Speech before the Appraisal Network and Real Estate Counseling Group of America, Inc. (February 28, 1991), cited in Mundy, supra note 83, at 8 n.3. Some have argued that "cost of control" is a more accurate term. Id . Furthermore, the cost to cure "is largely a theoretical construct since it is virtually impossible to return polluted property to its exact pre-contaminated condition." McCallion, supra note 81, at 130-31.

[FN87] See McCallion, supra note 81, at 130.

[FN88] Id.

[FN89] Id . at 139 (citing Bill Mundy, The Legal Impact of Hazardous and Toxic Materials on Property Values , Appraisal J. , April 1992, at 155).

[FN90] Mundy, supra note 83, at 9.

[FN91] Id.

[FN92] Id.

[FN93] Id.

[FN94] Id . at 10; see also James R. Webb, Nuclear Power Plants: Effects on Property Values , Appraisal J. , Apr. 1980, at 230-35. See generally City of Olathe v. Stott, 861 P.2d 1287 (Kan. 1993) (depicting an instance where stigma was associated with contamination from the petroleum processing industry); Criscuola v. Power Authority of New York, 621 N.E.2d 1195 (N.Y. 1993) (acknowledging that claimant's property value could be adversely affected by the public's fear of health risks posed by electromagnetic emissions from high voltage power lines over claimants' property).

[FN95] See City of Santa Fe v. Komis, 845 P.2d 753 (N.M. 1992). In Komis , the New Mexico Supreme Court allowed a plaintiff's claim of property value diminution to go forward despite expert testimony as to the safety of the technology involved. Id. The plaintiff claimed that 630 acres of his 673- acre property were unmarketable when the remaining 43 acres were condemned to provide a transportation corridor for the transport of nuclear waste to a waste repository (known as the Waste Isolation Pilot Project (WIPP)). Id . at 755 (numbers rounded off). The court held that the issue in determining the property devaluation was not whether the transportation technology was safe, but rather, whether public perception of the technology had a depressing effect upon the non-condemned 630-acre portion of the property. Id . at 760. The court stated that "if people will not purchase property because they fear living on or near a WIPP route, or if a buyer can only be found at a reduced price, a loss of value exists." Id. at 756-57. This case is also interesting for its thorough summary of the judicial approaches to the impact on property values of the public "fear" of such technologies such as powerlines, gas pipelines, and

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oil pipelines. Id. at 757-58.

[FN96] Mundy, supra note 83, at 10.

[FN97] Paul Slovic, Perception of Risk, Science, April 17, 1987, at 280-85, cited in Mundy, supra note 83, at 7, 11.

[FN98] Mundy, supra note 83, at 11.

[FN99] Id.

[FN100] Id.

[FN101] Id.

[FN102] Id.

[FN103] Id. Another interesting property damage issue occurs when science is unable to conclusively demonstrate health concerns associated with an environmental attribute, yet property values decline because of the perceived risk. In one of the first power line personal injury cases to go to trial in California, attorneys for the plaintiff noted that one of the greatest monetary threats to the utility industry are property damage claims which "will put a severe strain on industry . . . because it will be easier to prove diminished property value than personal injury." See Electromagnetic Radiation, Speakers discuss Impact on EMF Litigation from Swedish Study, Pending California Suit, BNA Toxics L. Daily, Apr. 8, 1993.

[FN104] Mundy, supra note 83, at 11.

[FN105] Id. at 11-12.

[FN106] See McMurry & Pierce, supra note 4, at 121-22, 131 (citing New Jersey ECRA, N.J. Stat. Ann. § § 13:1k-6 to -14 (West 1993)).

[FN107] N.J. Stat. Ann. § § 13:1K-6 to -14 (West 1993).

[FN108] N.J. Stat. Ann. § 13:1K-6, cited in Environmental Transfer Law Update: New Jersey and the Nation, Toxics L. Rptr., Sept. 16, 1992, at 459, 487.

[FN109] McMurry & Pierce, supra note 4, at 131 (citing Cal. Health & Safety Code § 25,232 (West 1988)).

[FN110] McMurry, supra note 4, at 132; see Ark. Code Ann. § 8-7-417 (Michie 1993); Conn. Gen. Stat. Ann. § § 22a-452 to -452a (West 1985 & Supp. 1994); N.H. Rev. Stat. Ann. § 147-B:10 (1990 & Supp. 1993); N.J. Stat. Ann. § 58-10-23.11f(3) (West 1992).

[FN111] See Mundy, supra note 83, at 11; see also McMurry & Pierce, supra note 4, at 132.

[FN112] Gladstone, supra note 5, at 800.

[FN113] Id.

[FN114] Id.

[FN115] See, e.g., Inmar Assoc. v. Borough of Carlstadt, 518 A.2d 1110, 1115 (N.J. Sup. Ct. 1986), rev'd, 549 A.2d 38 (N.J. 1988).

[FN116] Id.

[FN117] Id.

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[FN118] Id. at 1115-16.

[FN119] Id .

[FN120] Firestone Tire and Rubber Co. v. County of Monterey, 272 Cal. Rptr. 745, 750 (Ct. App. 1990).

[FN121] Cleanup Costs Not Currently Deductible, Must be Capitalized, Internal Revenue Service Technical Memo Says , BNA Tax'n L. Daily , March 11, 1993.

[FN122] Id.

[FN123] Id .

[FN124] Gladstone, supra note 5, at 800.

[FN125] Id.

[FN126] Id.

[FN127] Id.

[FN128] 9 Op. Counsel SBEA No. 58 (Jan. 18, 1989, revised April 1992) (citing N.Y. Const. art. 16, § 2 ("Assessments shall in no case exceed full value.")).

[FN129] Allied Corp. v. Town of Camillus , 604 N.E.2d 1348, 1350 (N.Y. 1992).

[FN130] See Firestone Tire and Rubber Co. v. County of Monterey, 272 Cal. Rptr. 745, 747-49 (Cal App. 6th Dist. 1990) ("Article XIII, sec. 1, subdiv. (a) of the California Constitution provides: ' . . . [a]ll property is taxable and shall be assessed at the same percentage of fair market value.' "); Reliable Elec. Finishing Co., Inc. v. Board of Assessors, 1990 Mass Tax LEXIS at *26 (Aug. 9, 1990) (" [O]ur constitution precludes departing from the standard of fair cash value by disregarding proven effects of environmental regulation on value."); Inmar Assocs., Inc. v. Borough of Carlstadt, 549 A.2d 38, 41-42 (N.J. 1988) (" [A]lthough we are sympathetic to the argument when the public concerns are so stark, the New Jersey Constitution affords us no discretion to balance the interests."), rev'd , 549 A.2d 38 (N.J. 1988).

[FN131] Norman J. Bruns, Speech at the American Bar Association Tax Section (Feb. 5, 1993), available in LEXIS, Tax Library, Tax Notes Today File.

[FN132] Id.

[FN133] Catherine Hubbard, Tax Analysts, Tax Notes (Feb. 19, 1993), available in LEXIS, Tax Library, Tax Notes Today File.

[FN134] Id.

[FN135] Id.

[FN136] Id.

[FN137] Comercia Bank-Detroit v. Metamora Township, Nos. 103325, 110482 & 112529, 1989 Mich. Tax LEXIS 12, at *15 (May 12, 1989) (even when the township failed to formally oppose the property owners evidence for assessment reduction because of impact of 3,000 barrels of PCB and other toxic substances on property, the taxpayer still faced "the presumptive validity of the assessment"); Bass v. Tax Comm'n of the City of New York, 578 N.Y.S.2d 158 (N.Y. App. Div. 1992); Monroe County Bd. of Assessments Appeals v. Miller, 570 A.2d 1386, 1390 (Pa. Commw. Ct 1990). "In tax assessment appeals, the initial burden is upon the Board to establish a prima facie case with regard to valuation, with the burden

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thereafter shifting to the taxpayer to present sufficient competent, credible and relevant evidence to overcome the prima facie validity of Board's action ." Id. (emphasis added). "The presumption of validity of an assessment by the taxing authority is rebutted where . . . credible evidence to the contrary is received." Bass , 578 N.Y.S.2d at 159 (citing Mobil Oil Corp. v. Tax Comm'n of the City of New York, 401 N.Y.S.2d 565, 566 (N.Y. App. Div. 1978)).

[FN138] Firestone Tire & Rubber Co. v. County of Monterey, 272 Cal. Rptr. 745 (Ct. App. 1990).

[FN139] Appeal of Great Lakes Container Corp., 489 A.2d 134 (N.H. 1985) (holding that assessed value was reasonable because the owner of a barrel reconditioning site closed by the federal government presented evidence which the tax board could use to infer value below the assessed value of \$224,150, the court pointed to evidence that the property owner had purchased the site for \$399,200 in 1976 and had attempted to sell it for \$350,000 after the federal government had closed it in 1980).

[FN140] See Gladstone, supra note 5.

[FN141] Norman J. Bruns, Speech at the American Bar Association Tax Section (Feb. 5, 1993), available in LEXIS, Tax Library, Tax Notes Today File.

[FN142] Id.

[FN143] See, e.g. , Katz v. Assessor of Mt. Kisco, 82 A.D.2d 654 (N.Y. Ct. App. 1981).

[FN144] 9 Op. Counsel SBEA 58, at 3 (Jan. 18, 1989, Revised Apr. 1992).

[FN145] Id.

[FN146] See supra notes 14-65 and accompanying text.

[FN147] See supra notes 66-111 and accompanying text.

[FN148] See generally Gladstone, supra note 5 (discussing the recent categorization of various tax court approaches by author); McMurry & Pierce, supra note 4 (building upon the categories defined by these authors).

[FN149] See, e.g. , Comercia Bank-Detroit v. Metamora Township, 1989 Mich. Tax LEXIS 12 (May 12, 1989).

[FN150] Id . at *17.

[FN151] Id.

[FN152] Monroe County Board of Assessment Appeals v. Miller, 570 A.2d 1386, 1389 (Pa. Commw. Ct. 1990).

[FN153] Comercia Bank-Detroit , 1989 Mich. Tax LEXIS 12, at *17.

[FN154] Id. at *9 (basing his determination on residual groundwater contamination).

[FN155] Id.

[FN156] Id. at *5.

[FN157] Id. at *17 (noting that although well water had been given approval for consumption, history of the parcel will taint marketability unless full environmental cleanup is accomplished and duly documented).

[FN158] Monroe County Board of Assessment Appeals v. Miller, 570 A.2d 1386, 1387 (Pa. Commw. Ct. 1990).

[FN159] Id. at 1390.

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[FN160] Id .

[FN161] See, e.g. , Community Consultants, Inc. v. Bedford Township, 1985 WL 17404, at *3 (Mich. Tax Tribunal 1985).

[FN162] Id .

[FN163] Id. at *3.

[FN164] Id.

[FN165] Id.

[FN166] 489 A.2d 134 (N.H. 1985).

[FN167] Id. at 136.

[FN168] Id. at 135; see also Trustees of Phillips Exeter Academy v. Exeter, 33 A.2d 665 (N.H. 1943) (stating that the value of property for assessment purposes is its sale value).

[FN169] Great Lakes , 489 A.2d at 136.

[FN170] Id.

[FN171] Id .; see also Wise Shoe Co. v. Exeter, 406 A.2d 720 (N.H. 1979).

[FN172] Great Lakes , 489 A.D.2d at 136.

[FN173] Id. ; see Chalmers & Roehr , supra note 11, at 28 .

[FN174] Great Lakes , 489 A.2d at 136 .

[FN175] Id.

[FN176] Fjetland v. Brown, No. 37,533, 1990 Wash. Tax LEXIS 146, at *1, * 14 (Wash. Bd. of Tax Appeals June 5, 1990).

[FN177] Id . at *3.

[FN178] Id. at *5, *12.

[FN179] Id . at *2, *12. An almost identical analysis was used in Lefevre v. Vanourek, Nos. 35315-35318, 1990 Wash. Tax LEXIS 240, at *3 (Wash. Bd. of Tax Appeals June 13, 1990), where the soil and groundwater in a seven-acre parcel were contaminated by pesticides, herbicides, ammonia, and metals. The Washington Department of Ecology agreed to clean up the property with public funds or funds recovered from PRP's or their insurers. Id. at * 4. With cleanup anticipated by 1995, the court calculated the present worth of future benefits estimated to begin flowing then. Id. at *15. Adding in a reversionary value of the "clean site" and applying a capitalization rate of 12%, the court concluded that the true present value of the site for the years of the tax appeals (1985-88) to range from \$128,800 to \$180,900. Id. at * 15-*16.

[FN180] Fjetland , No. 37,533, 1990 Wash. Tax LEXIS 146, at *12.

[FN181] Id.

[FN182] Id. at *7; see also Patchin, supra note 36, at 9 (discussing that the development of valuation techniques is still in its infant stage).

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[FN183] Fjetland , No. 37,533, 1990 Wash. Tax LEXIS 146, at *14. "Anticipation is the perception that value is created by the expectation of benefits to be derived in the future." Id. (quoting The American Institute of Real Estate Appraisers, The Appraisal of Real Estate , 32 (9th ed. 1987)).

[FN184] Id . at *14. The Washington Board of Tax Appeals has been consistent with this type of future benefit analysis. In the Lefevre case, a similar finding was made. See Lefevre v. Vanourek , Nos. 35,315-35,318, 1990 Wash. Tax LEXIS 240, at *15 (Wash. Bd. of Tax Appeals June 13, 1990).

[FN185] Fjetland , No. 37,533, 1990 Wash. Tax LEXIS 146, at *14; see also Slack , supra note 14, at 68.

[FN186] Fjetland , No. 37,533, 1990 Wash. Tax LEXIS 146, at *14.

[FN187] Id.

[FN188] Id.

[FN189] Id . at *15.

[FN190] Id. ; see Patchin , supra note 36, at 13, 15.

[FN191] Fjetland , No. 37,533, 1990 Wash. Tax LEXIS 146, at *15. The court did not, however, make any allowances for inflation. Id . at *15 n.2; see also Mundy, supra note 83, at 7.

[FN192] Fjetland , No. 37,533, 1990 Wash. Tax LEXIS 146, at *4, *15.

[FN193] Id.

[FN194] See Gladstone, supra note 5, at 800 (discussing the analysis of DCF by the New York courts in Bass v. Tax Comm'n. of the City of New York, 205 N.Y. L.J. 25 (County Ct. 1991)); see also D'Elia & Ward, supra note 61, at 357-58 (discussing the Bass case and the DCF method). For a complete discussion of the Bass case, see infra note 200.

[FN195] Benjamin J. Smith, Use of Discounted Cash Flow Analyses in Real Property Tax Valuations , 15 Assessment Digest 12, 12 (1993).

[FN196] Id. ; see Gladstone, supra note 5, at 800.

[FN197] Smith, supra note 195, at 12; see also D'elia & Ward, supra note 61, at 357.

[FN198] Smith, supra note 195, at 12.

[FN199] For a discussion of the direct income capitalization approach, see supra notes 33-47 and accompanying text.

[FN200] Smith, supra note 195, at 13.

[FN201] Id. at 13-14; see Bass v. Tax Comm'n of the City of New York, 205 N.Y. L.J. 25, col. 3 (N.Y. County Ct. 1991), aff'd 578 N.Y.S.2d 158 (N.Y. App. Div. 1992). In Bass, the court chastised New York City's assessors for failing to consider the impact of serious asbestos contamination and associated removal costs on an office building's market value. Id. The City had attempted to value the property solely through the comparable sales method using only uncontaminated comparables. Id.

The court speculated that it may be possible to construct future income streams by factoring in asbestos remediation schedules with concomitant increased operating costs, as well as reduced tenancies, for this income-producing property. Id. The court engaged in a painstakingly complex calculation, combining the costs of the asbestos removal schedule with anticipated income flows. Id. With asbestos removal to be performed in later years, reduced net income was projected out in future years. Id. Income streams were estimated to be near normal during years in which no remediation occurred. Id. Conversely, income flow would be reduced during the disturbances and inconveniences associated with remediation activities. DCF might be used, the court hypothesized, to calculate the "present value" of the income for each of these years,

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plus the final sale price or reversionary value. Id.

Ultimately, the court rejected the DCF method for this building, citing the calculation as "an assumption-laden forecast." Id. Without any meaningful analysis, the court reinstated a value which the City and the taxpayer had agreed upon in prior negotiations. Id.

[FN202] Smith, *supra* note 195, at 14.

[FN203] Id.

[FN204] No. 36278-36280, 1990 Wash. Tax LEXIS 208, at *1 (July 12, 1990).

[FN205] Id .

[FN206] Id. at *30.

[FN207] Id.

[FN208] Id . at *32.

[FN209] Id .

[FN210] Id. at *33-*37.

[FN211] Id . at *36-*39.

[FN212] Id . at *45.

[FN213] See Mundy, *supra* note 83, at 7.

[FN214] Northwest Cooperage , No. 36,278-36,280, 1990 Wash. Tax LEXIS 208 at *42.

[FN215] Id .

[FN216] Firestone Tire & Rubber Co. v. County of Monterey, 272 Cal. Rptr. 745, 751 (Ct. App. 1990).

[FN217] See, e.g. , Reliable Elec. Finishing Co. v. Board of Assessors, 573 N.E.2d 959, 960 (Mass. 1991) (declining to grant a tax abatement where taxpayer failed present sufficient proof of how anticipated cost of cleanup would affect the fair market value of the property).

[FN218] 272 Cal. Rptr. 745 (Ct. App. 1990).

[FN219] Id . at 746.

[FN220] Id. at 751.

[FN221] Id. at 748. But see Allied Corp. v. Town of Camillus, 604 N.E.2d 1348, 1351 (N.Y. 1992) (applying "specialty property" method of valuation to wastebed property uniquely adapted to that end).

[FN222] Firestone , 272 Cal. Rptr. at 748 (citing Dennis v. County of Santa Clara, 263 Cal. Rptr. 887 (Ct. App. 1989)).

[FN223] Id. at 749.

[FN224] Id. at 750.

[FN225] Id. at 750, 751.

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[FN226] Id. at 750.

[FN227] Id. at 752; accord Reliable Elec. Finishing Co. v. Board of Assessors, 573 N.E.2d 959, 960 (Mass. 1991).

[FN228] See Inmar Associates v. Borough of Carlstadt, 549 A.2d 38 (N.J. 1988). The Inmar decision is discussed infra at notes 230-48. See also Wyckoff Co. v. Belas, No. 39,107, 1991 Wash. Tax LEXIS 668, at *1 (Wash. Bd. of Tax Appeals, Oct. 17, 1991). In the Wyckoff case, the owners of an on-going pole-treating operation on one lot and a groundwater treatment facility on another lot, which were together designated as an NPL "Superfund Site," challenged the assessment on the 28-acre groundwater treatment facility site. Wyckoff, No. 39107, 1991 Wash. Tax LEXIS 668, at *1. The taxpayer had spent roughly \$1.7 million for the treatment facility and an additional \$307,147 on operations and monitoring, consultation and legal fees. Id. at *4.

The assessor, valuing the lot at \$3,178,000, contended that the property had value and that only the treatment facility investment should be considered in measuring contamination effects on the property value. Id. at *4,*5. Using the cost method, she based her estimate of the underlying land value of the lot on comparable, uncontaminated land, and improvement values on replacement cost, utilizing trended investment techniques. Id. at *5. Only depreciation values associated with the treatment facility were used to factor in a reduction for pollution control problems. Id. at *6.

The site owner countered that ongoing operating costs, including legal fees should be considered. Id. at *7. With ongoing operations, consulting and legal costs of \$9.1 million estimated to be associated with a seven year cleanup period, the owner argued that the property had no value. Id.

Distinguishing this site from Northwest Cooperage Co. v. Ridder, discussed supra notes 204-15 and accompanying text, where the property produced income, (and, therefore, had a "value in use"), and other cases such as Fjetland v. Brown, discussed supra notes 176-93 and accompanying text, where cleanup costs were to be borne by other PRP's, the court ruled that a cost approach method of property valuation was proper. Id. at *12, *24. While not advocating the deduction of pollution control costs for operating industrial facilities, the court reasoned that operating costs of the treatment facility should be deducted for this particular site for three reasons: 1) the costs are directly attributable for site remediation of an "environmental encumbrance"; 2) there is no income stream from which the costs may be recovered; and 3) there is no evidence that the present worth of future benefits would be greater than the remediation costs. Id. at *25. Therefore, the property's value was held to be nominal. Id. at *26.

The zenith of allowing a reduction in assessed value for compliance with a county sanitary code was reached in a New York case, Northville Industries Corp. v. Board of Assessors, 531 N.Y.S.2d 592 (N.Y. App. Div. 1988). For a bulk oil storage facility on 263 acres on Long Island Sound, the court used a replacement cost method calculated on a per unit basis (\$2.50 per barrel of storage capacity) to determine a fair market value. Id. at 594. The court concluded that an estimated \$2,533,500 cost to comply with the Suffolk County Sanitary Code should be deducted from each of the tax year's assessments on the property which were in contention. Id. at 595.

[FN229] 549 A.2d 38 (N.J. 1988).

[FN230] See N.J. Stat. Ann. § § 13:1K-6 to -14 (West 1991 & Supp.1994). A recent article describes the Inmar decision as "the most concrete guidance in terms of describing the evidence necessary to support a judicial determination of devaluation . . ." D'Elia & Ward, supra note 61, at 353-54.

[FN231] Inmar, 549 A.2d at 40.

[FN232] Id. at 40, 41.

[FN233] Id. at 40.

[FN234] Gladstone, supra note 5, at 801-02.

[FN235] Inmar, 549 A.2d at 41.

[FN236] Id. at 43.

[FN237] Id. at 42.

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[FN238] Id.

[FN239] Id.

[FN240] Id. at 43, 44.

[FN241] Id. at 44.

[FN242] Id. ; see also Allied Corp. v. Camillus, 604 N.E.2d 1348, 1350 (N.Y. 1992), discussed infra notes 249-60 and accompanying text.

[FN243] Inmar, 549 A.2d at 44 (citing J. Eaton, Real Estate Valuation in Litig. 171 (1982)).

[FN244] Id. at 45.

[FN245] Id.

[FN246] Id. at 46.

[FN247] Id. at 45.

[FN248] For a discussion of specialty properties and their valuation, see supra notes 21-25 and accompanying text.

[FN249] Allied Corp. v. Town of Camillus, 604 N.E.2d 1348 (N.Y. 1992).

[FN250] Id. at 1350.

[FN251] Id.

[FN252] Id. Although "swamplands" or wetlands are considered to be of extremely high value by environmental and natural resource economists, land characterized as "swampland" has a low value in monetary terms. For an analysis of wetland valuation concepts, see Paul F. Scodari, Environmental Law Institute, Wetlands Protection: The Role of Economics, Wash., D.C. 1990.

[FN253] Allied, 604 N.E.2d at 1351.

[FN254] Id.

[FN255] Id. at 1352.

[FN256] Id.

[FN257] Id.

[FN258] Id.

[FN259] Id.

[FN260] See Gladstone, supra note 5, at 799.

[FN261] For a discussion of regression analysis and its application in the valuation of contaminated properties, see supra notes 58-65 and accompanying text.

[FN262] For a thorough discussion of impacts associated with waste facilities, see Michael B. Gerrard, Fear and Loathing in

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the Siting of Hazardous and Radioactive Waste Facilities: A Comprehensive Approach to a Misperceived Crisis, 68 Tul. L. Rev. 1047 (1994).

[FN263] See Criscuola v. Power Authority of New York, 671 N.E.2d 1195 (N.Y. 1993) (dealing with the stigma associated with the public's perceived health risks from proximity to power lines); Salk v. Metamora Township, No. 89,167, 1985 WL 15,497 (Mich. Tax Trib.) (recognizing the stigmatization of properties in the proximity of a contaminated landfill site); see also Stephen L. Kass & Michael B. Gerrard, Emotional Distress and Property Values After Criscuola, 210 N.Y. L.J. at 3, col. 1 (Oct. 22, 1993). "Problems in assessing property may reach to land adjacent to contaminated sites." McMurry & Pierce, supra note 4, at 140. Furthermore, "studies and survey research techniques have been used to document the adverse impact on values of property in the vicinity of real or perceived hazards such as nuclear power plants, sanitary landfills and hazardous and toxic sites." McCallion, supra note 80, at 139 (emphasis added).

[FN264] Salk v. Metamora Township, No. 89167, 1985 WL 15,497 (Mich. Tax Trib.); see also Richter v. Macomb Township, No. 87090, 1985 WL 15,496 (Mich. Tax Trib.).

[FN265] Salk, No. 89167, 1985 WL 15,497, at *2.

[FN266] Id.

[FN267] 487 N.W.2d 715 (Mich. 1992).

[FN268] Id. at 718.

[FN269] Id.

[FN270] See Criscuola v. Power Authority of New York, 671 N.E.2d 1195 (N.Y. 1993).

[FN271] Id. at 1196 (citing San Diego Gas & Electric Co. v. Daley, 253 Cal. Rptr. 144 (Ct. App. 1988); 4A Nichols, Eminent Domain § 14.02(1)(b), at 14-30 (Sackman 3d ed. 1993)); see also Florida Power and Light Co., 518 So. 2d 895 (Fla. 1987); Willsey v. Kansas City Power Co., 631 P.2d 268 (Kan. Ct. App. 1981).

[FN272] Criscuola, 621 N.E.2d at 1197. Although Criscuola dealt with a claim that adjacent properties were stigmatized by public fear associated with power lines, its holding may easily be extended to claims of property value diminution of parcels near contaminated sites or waste storage facilities. Public fear associated with waste sites is well documented. See generally Gerrard, supra note 263.

[FN273] See Wis. Stat. Ann. § § 144.43-144.47 (West 1989 & Supp. 1994).

[FN274] Wis. Stat. Ann. § 144.445 (West 1989 & Supp. 1994); see also Arthur J. Harrington, The Right to a Decent Burial: Hazardous Waste and its Regulation in Wisconsin, 66 Marq. L. Rev. 223, 265 n.184 (1983).

[FN275] See, e.g., Vim Construction v. Board of Assessors, 442 N.Y.S.2d 533 (N.Y. App. Div. 1981).

[FN276] Id. at 534.

[FN277] Id. at 536.

[FN278] Id.

[FN279] Id.

[FN280] See, e.g., Tompkins County, N.Y., Property Value Protection Program for Sanitary Landfill Neighborhood, adopted Nov. 15, 1988, revised May 16, 1989; City of Muskego, WI; Agreement with Emerald Park, Inc. (1991). In the Muskego example, the developer agreed to pay fair market value plus ten percent to property owners who were unable to sell their property at a fair market price because of its proximity to the landfill. Id.

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[FN281] New York State Water Resources Institute, Center for Environmental Research, Cornell University, The Tompkins County Landfill: A Public Opinion Survey , Sept.-Oct., 1988.

[FN282] Tompkins County, N.Y., Property Value Protection Program for Sanitary Landfill Neighborhood , adopted Nov. 15, 1988, revised May 16, 1989.

[FN283] Id.

[FN284] Kinnard et al., supra note 64.

[FN285] Id .

[FN286] Id. at 19.

[FN287] Id .

[FN288] Id .

[FN289] Judge Allows Rocky Flats Case to Continue, Expands Discovery Period, Access to Files , BNA Toxics L. Daily , April 26, 1993.

[FN290] I. Leo Motiuk & Diane M. Miller, Giving the Green Light to Green Marketing , in Environmental Audits: Evaluating and Responding to Environmental Concerns (PLI Corp. L. & Practice Course Handbook Series No. B4-6990, Dec. 1991-Jan. 1992).

[FN291] The increased use of valuation concepts has led to the recent consideration of the effect of contamination on natural resources associated with the underlying land. See Frank B. Cross, Natural Resource Damage Valuation , 42 Vand. L. Rev. 269, 275-80 (1989). One recent article sets forth an example of the application of natural resource valuation concepts to a determination of natural resource lease values. See David L. Markell, The Future Application of the Public Trust Doctrine in New York State: Legislative Initiatives and Beyond , 4 Alb. L.J. Sci. & Tech. 97, 109-18 (1994) (discussing the relationship of natural resource damages to proposed valuation and fee schedules of New York State's underwater lands).

[FN292] Interview with Sharon Brooks, supra note 56; see also Victoria Adams & Bill Mundy, The Valuation of High-Amenity Natural Land , Appraisal J., J an., 1991, at 53; Maureen L. Cropper & Wallace E. Oates, Environmental Economics: A Survey , J. of Economic Literature, June , 1992, at 675-740.

[FN293] Sanctions Ordered Against Michigan Lawyer; Court Says Claims Unsupported by Evidence , 6 Toxics L. Rep. , October 9, 1991, at 580 (reporting Maruniak v. Orkin Exterminating Co., No. 88-10788-ND (Mich. Cir. Ct. 1991)).

[FN294] George M. Newcombe, Trial Strategy in Litigating Contaminated Property Disputes: Use of Experts and Demonstrative Evidence, in Strategies For Litigating Contaminated Property Disputes (PLI Litig. & Admin. Practice Course Handbook Series No. B4-7026, Dec. 1991-Jan. 1992); Kevin T. Haroff, Use of Experts and Demonstrative Evidence , in Strategies For Litigating Contaminated Property Disputes (PLI Litig. & Admin. Practice Course Handbook Series No. H4-5121, Dec. 1991-Jan. 1992).

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